federal register

Tuesday
June 2, 1992

Part VIII

Department of Transportation

Research and Special Programs Administration

City of New York; Application for Waiver of Preemption as to Fire Department Regulations Concerning Pickup/Delivery Transportation of Flammable and Combustible Liquids and Flammable and Combustible Gases; Notice

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

[Docket No. WPDA-1; Waiver of Preemption Determination No. 1 (WPD-1)]

City of New York Application for Waiver of Preemption as to Fire Department Regulations Concerning Pickup/Delivery Transportation of Flammable and Combustible Liquids and Flammable and Combustible Gases

APPLICANT: The City of New York.

LOCAL LAW AFFECTED: Fire Prevention Directives 3-76, 5-63, 6-76, and 7-74 of the City of New York's Bureau of Fire Prevention.

APPLICABLE FEDERAL REGULATIONS: Hazardous Materials Transportation Act, 49 App. U.S.C. 1801 *et seq.*, and the Hazardous Materials Regulations, 49 CFR parts 171-180, issued thereunder.

MODE AFFECTED: Highway.

SUMMARY: This is an administrative ruling by the Research and Special Programs Administration (RSPA) of the U.S. Department of Transportation (DOT) on an application by the City of New York (City) for a waiver of preemption as to certain sections of four City Fire Protection Directives (FPDs). This ruling was applied for, and is issued, pursuant to provisions of RSPA's Hazardous Materials Program Procedures set forth at 49 CFR 107.215-107.227.

RSPA denies the City's application for a waiver of preemption as to the design and construction requirements for trucks transporting flammable and combustible liquids, grants a waiver of preemption as to the requirements on emergency transfers and discharging gasoline by gravity into underground tanks; and dismisses the City's application without prejudice for lack of information as to the requirements for transporting compressed gases. RSPA finds that the City's inspection and permit requirements (as general safety measures, separate from its equipment requirements) and the smoking prohibitions are not preempted, and no action is taken with respect to those requirements. RSPA's determination as to each FPD section covered by the City's application is set forth in Part IV below. The analysis in Part III presents the basis on which these determinations have been reached.

FOR FURTHER INFORMATION CONTACT: Frazer C. Hilder, Office of the Chief Counsel, Research & Special Programs Administration, U.S. Department of Transportation, Washington, DC 20590-0001 (Tel. No. 202-366-4400).

I. General Authority and Waiver of Preemption Under the HMTA

II. Background

A. The City's Application for Waiver of Preemption
1. Summary of the City's requirements
a. Equipment requirements
b. No smoking regulations
c. Emergency transfer requirements
d. Inspection and permit system
2. Scope of the City's requirements
B. Litigation and Agency Administrative Action

III. Discussion and Analysis

A. Equipment Requirements—Flammable and Combustible Liquids
1. Tank trucks and the liquids carried
a. Trucks allowed under City and DOT regulations
b. Pickup and delivery of gasoline and fuel oil
c. Pickup and delivery of other liquids
d. Alleged conflicts with Federal standards
2. Safety evaluation of City and DOT tank trucks
a. Potential damage from accidents
b. Accident frequency
c. Accident results and damage
d. Contentions on "exporting" risk
e. Finding on level of protection to the public
3. Extent of burdens on commerce
a. Increased costs and impairment of efficiency
b. Basis and purpose of the City's requirements
c. Need for uniformity and existence of conflicts
d. Finding on burden on commerce
4. Additional gasoline truck requirements
a. Color and lettering requirements
b. Gravity discharge
B. Equipment Requirements—Compressed Gases
1. Truck types prohibited by the City
2. Additional rules on gases in cylinders
C. No Smoking Regulations
D. Emergency Transfer Requirements
E. Inspection and Permit System

IV. Ruling

V. Petition for Reconsideration/Judicial Review

I. General Authority and Waiver of Preemption Under the HMTA

The Hazardous Materials Transportation Act (HMTA) was enacted in 1975 to give the Department of Transportation greater authority "to protect the Nation adequately against the risks to life and property which are inherent in the transportation of hazardous materials in commerce." 49 App. U.S.C. 1801. It "replace[d] a patchwork of state and federal laws and regulations * * * with a scheme of uniform, national regulations." *Southern Pac. Transp. Co.* v. *Public Service Comm.*, 909 F.2d 352, 353 (9th Cir. 1990).

The Hazardous Materials Regulations (HMR) have been promulgated in accordance with the HMTA's direction that the Secretary of Transportation "issue regulations for the safe transportation of hazardous materials in intrastate, interstate, and foreign commerce." 49 App. U.S.C. 1804(a)(1).

"[U]niformity was the linchpin in the design of the [HMTA]," including the 1990 amendments to that statute. *Colorado Public Utilities Comm.* v. *Harmon*, 951 F.2d 1571, 1575 (10th Cir. 1991). Congress believed that uniform regulations promote safety in the transportation of hazardous materials, specifically finding in 1990 that:

(3) Many States and localities have enacted laws and regulations which vary from Federal laws and regulations pertaining to the transportation of hazardous materials, thereby creating the potential for unreasonable hazards in other jurisdictions and confounding shippers and carriers which attempt to comply with multiple and conflicting registration, permitting, routing, notification, and other regulatory requirements,

(4) Because of the potential risks to life, property, and the environment posed by unintentional releases of hazardous materials, consistency in laws and regulations governing the transportation of hazardous materials is necessary and desirable,

(5) In order to achieve greater uniformity and to promote the public health, welfare, and safety at all levels, Federal standards for regulating the transportation of hazardous materials in intrastate, interstate, and foreign commerce are necessary and desirable.

49 App. U.S.C. 1801 note.

Unless otherwise authorized by Federal law or unless a waiver of preemption is granted by DOT, the HMTA (49 App. U.S.C. 1811(a)) explicitly preempts "any requirement of a State or political subdivision thereof or Indian tribe" if

(1) Compliance with both the State or political subdivision or Indian tribe requirement and any requirement of [the HMTA] or of any regulation issued under [the HMTA] is not possible,

(3) The State or political subdivision or Indian tribe requirement as applied or enforced creates an obstacle to the accomplishment and execution of [the HMTA] or the regulations issued under [the HMTA], or

(3) It is preempted under section 105(a)(4) [49 App. U.S.C. 1804(a)(4), describing five "covered subject" areas] or section 105(b) [49 App. U.S.C. 1804(b), dealing with highway routing requirements] * * *

The HMTA further provides that the Secretary of Transportation may waive preemption, in response to an application which "acknowledges" preemption, upon a determination that

the State, local or Indian tribe requirement "(1) affords an equal or greater level of protection to the public than is afforded by the requirements of [the HMTA] or the regulations issued under [the HMTA], and (2) does not unreasonably burden commerce." 49 App. U.S.C. 1811(d). A party to a waiver of preemption proceeding may seek judicial review of the Secretary's decision "by the appropriate district court of the United States * * * within 60 days after such decision becomes final." 49 App. U.S.C. 1811(e).

The Secretary of Transportation has delegated to RSPA the authority to decide applications for a waiver of preemption, except for those concerning highway routing which were delegated to the Federal Highway Administration (FHWA). 56 FR 31343 (July 10, 1991). RSPA's regulations concerning waivers of preemption are set forth at 49 CFR 107.215–107.227 (including amendments published in the **Federal Register** on February 28, 1991 (56 FR 8616), April 17, 1991 (56 FR 15510), and May 13, 1992 (57 FR 20424)).

Under these regulations, RSPA's Associate Administrator for Hazardous Materials Safety decides whether to grant a waiver or not. "Any person aggrieved by" RSPA's decision on the City's application for a waiver may file a petition for reconsideration within 20 days of service of that decision. 49 CFR 107.223(a). Any party to this proceeding may seek review of RSPA's decision "by the appropriate district court of the United States * * * within 60 days after such decision becomes final." 49 App. U.S.C. 1811(e).

The decision by RSPA's Associate Administrator for Hazardous Materials Safety becomes RSPA's final decision 20 days after service if no petition for reconsideration is filed within that time; the filing of a petition for reconsideration is not a prerequisite to seeking judicial review under 49 App. U.S.C. 1811(e). If a petition for reconsideration is filed, the action by RSPA's Associate Administrator for Hazardous Materials Safety on the petition for reconsideration is RSPA's final decision. 49 CFR 107.223(e).

In making decisions on applications for waiver of preemption, RSPA is guided by the principles and policy set forth in Executive Order No. 12612, entitled "Federalism." 52 FR 41685 (Oct. 30, 1987).

II. Background

A. The City's Application for Waiver of Preemption

In its October 10, 1991 application, the City requests a waiver of preemption as to requirements set forth in parts or all of 19 separate sections of FPDs 3–76, 5–63, 6–76 and 7–74. The specific requirements are set forth in full in Part I of the City's application; that application (without its exhibits) is reproduced in Appendix A to RSPA's November 15, 1991 Public Notice and Invitation to Comment. 56 FR 58126, 58128.

1. Summary of the City's Requirements

The FPD provisions for which the City requests a waiver of preemption limit the size and type of trucks that can be used for the pickup and delivery of flammable and combustible liquids and gases; prescribe certain procedures for handling such materials and for transfers of flammable and combustible liquids in an emergency; prohibit smoking on trucks transporting flammable and combustible liquids; and establish an inspection and permit system.

a. *Equipment requirements*—(i) Tank trucks for the pickup and delivery of gasoline and other flammables must be single unit vehicles (semi-trailer and full-trailer vehicles are not allowed); the tank must be made of "selected steel," must be no larger than 4,000 gallons in volume (with a 5% space for expansion), and must be elliptical in shape with internal compartments no larger than a specified size. In 4,000 gallon tanks, longitudinal baffle plates to prevent sloshing must be provided. FPD 7–74 §§ 4, 5, 29. The tank of a gasoline truck must be painted red, with "GASOLINE" in white letters of a specified size on the sides and rear of the tank. FPD 7–74 § 28. Flammable liquids may be "discharged" from a tank truck only by gravity. FPD 7–74 § 3.

(ii) Tank trucks for the pickup and delivery of combustible liquids, including home heating oil, must be either single-unit or semi-trailer vehicles (full trailers are prohibited). A tank must be made of "open hearth or blue annealed steel throughout" (or other materials which will provide equivalent "tank strengths and rigidities"), may not be larger than 4,400 gallons, and must have internal compartments. The same requirements apply to heavier grades of "oil such as Number 4, 5 and 6 fuel oil," except that for these heavier grades the tank size may be as large as 6,500 gallons, and compartments are not necessary. However, tanks larger than 5,500 gallons must have a baffle or baffles to prevent sloshing. FPD 6–76 §§ 4, 5, 24.

(iii) Tank trucks may not be used for the storage, transport or delivery of liquified petroleum gases, 22 other named gases (or mixtures thereof), or "[o]ther gases which may be deemed hazardous by the Fire Commissioner." Full trailers more than 12 feet long and 75 cubic feet in volume may not be used to transport compressed gases of any kind. FPD 5–63 § 10. Cylinders or containers of compressed gas must be restrained, "not loaded in a position which would prevent the proper functioning of the safety devices * * *" (which the City interprets as any position other than upright), and have a safety cap in place during transport. FPD 5–63 § 5.1.2, NYC Appl. 28.

b. *No smoking regulations*—Federal regulations prohibit smoking within 25 feet of a truck carrying, or while loading or unloading, flammable materials. The City extends its no smoking rules to persons on tank trucks carrying combustible liquids and mixtures "at all times," and on platform trucks "while transporting or delivering" flammable liquids or petroleum or shale oils (or the liquid products thereof). FPDs 6–76 § 25, 3–76 § 12.

c. *Emergency transfer requirements*—In an "emergency caused by an accident or defective" equipment, flammable or combustible liquids or mixtures may be transferred from a tank or platform truck "only to vehicles with Fire Department permits or otherwise authorized * * *" and when "authorized by a representative of the Fire Department." FPDs 7–74 § 26, 6–76 § 26, 3–76 § 14.

d. *Inspection and permit system*—Tank trucks for flammable and combustible liquids, and any trucks used to transport compressed gases, must have a Fire Department permit, valid for no more than one year, evidenced by a metal plate and "yearly renewal tab" attached to the truck. There is a fee for the permit. FPDs 7–74 § 1, 6–76 § 1, 5–63 §§ 1, 9. The regulations themselves do not mention an inspection, but state that the applicant must provide "such information as [the Fire Commissioner] shall require."

2. *Scope of the City's Requirements*

The requirements for which the City seeks a waiver of preemption apply throughout the City, in all five boroughs—Manhattan, Bronx, Brooklyn, Queens and Staten Island. With the exception of the "no smoking" prohibition in FPD 6–76 § 25, these requirements are among those which RSPA determined to be preempted in Inconsistency Ruling No. IR–22, 52 FR 46574 (Dec. 8, 1987), correction, 52 FR 48107 (Dec. 29, 1987), and the Administrator's Decision on Appeal (IR–22(A)), 54 FR 26698 (June 23, 1989). An application for a determination of inconsistency as to separate requirements in these FPDs relating to

driver training and certification is presently before RSPA in Docket No. IRA–40C. The City has decided to revise or eliminate many other requirements in these FPDs, and it has not asked for a waiver of preemption as to those other requirements. NYC Reply 7.

The City emphasizes that the FPDs covered by its waiver application do not apply to "through" traffic, *i.e.*, vehicles that transit the City without stopping for pickup or delivery and which are subject to separate routing and time restrictions; however, trucks which meet the requirements of these FPDs are exempted from the City's routing and time restrictions on through traffic. NYC Reply 4–5. These routing and time restrictions were determined to be inconsistent with, and preempted by, the HMTA and the HMR in Inconsistency Ruling No. IR–23, 53 FR 16840 (May 11, 1988); the City's appeal from that determination is pending. See 53 FR 32185 (Aug. 23, 1988). (These "through" traffic regulations, as considered in IR–23, also apply to "deliveries to piers, airports and shipping terminals for transshipment out of the City." However, movements in the opposite direction—pickups at piers or shipping terminals for transport out of the City—are governed by the FPDs for which a waiver of preemption is sought.)

The City also stresses that it has issued variances or waivers of the requirements in these FPDs, "upon a showing of limited use consistent with safety," NYC Reply 27, apparently under the Fire Commissioner's authority to "modify or waive such provisions * * * consistent with public safety." FPDs 7–74 § 33–1, 6–76 § 27–1, 3–76 § 15–1. Among the examples cited by the City is the variance granted to Castle Oil Corporation "for seven of its large aluminum tankers to pick up fuel oil at its bulk storage facility in the City and truck it to customers outside the City without stopping for any in-City deliveries at all, on the condition that the trucks keep to certain routes that were prescribed for them by the Fire Department * * *" NYC Reply 28.

B. Litigation and Agency Administrative Action

The City's requirements at issue here have been the subject of litigation in Federal court. On October 18, 1991, shortly after RSPA received the City's waiver application, the United States District Court for the Eastern District of New York issued an order, in *National Paint & Coatings Ass'n, Inc.* v. *City of New York*, No. CV–84–455 (ERK), confirming that the City had acknowledged preemption of the provisions of FPDs 3–76, 5–63, 6–76, and 7–74 for which it seeks a waiver here. The district court found that (except for the no smoking rules) these requirements were preempted and enjoined the City from further enforcement of them; however, the court stayed for 150 days its injunction against enforcement of the provisions for which the City had applied to RSPA for a waiver of preemption.

RSPA's November 15, 1991 notice solicited public comments on the City's waiver application. When RSPA announced it would not be able to issue a decision on the City's waiver application before the expiration of the Court's 150-day stay, see Public Notice and Reopening of Comment Period, 57 FR 6767 (Feb. 27, 1992), the City renewed an earlier request for a "temporary stay of preemption." After considering the materials and arguments submitted by the City and opponents to the City's request, RSPA found it had no authority to either (1) extend the Court's own stay of its injunction or (2) grant a temporary or interim waiver of preemption pending its final decision. Accordingly, on March 12, 1992, RSPA denied the City's request for interim relief. 57 FR 10057 (Mar. 23, 1992).

The day after RSPA denied the City's request for an interim waiver of preemption, the City asked the Federal court to extend its 150-day stay of the injunction against enforcement of the requirements for which a waiver had been applied. In a March 23, 1992 order, the Federal court denied the City's request. It stated that "a temporary waiver of the preemptive force * * *" of the HMTA, and not an extension of the stay sought by the City, was "the only relief" which would permit the City to continue to enforce its regulations. The Federal court directed the entry of a judgment, from which the City has appealed to the Court of Appeals for the Second Circuit. During the pendency of these further court proceedings, the trial and appellate courts have stayed the injunction against enforcement of the City's requirements covered by this waiver application.

Detailed comments and supporting materials have been submitted by numerous parties both in favor of, and in opposition to, the City's waiver application. Although the comment period originally ended on January 17, 1992, comments both supporting and opposing the City's application continued to be received after that date. To assure all interested parties the opportunity to present rebuttals, the comment period was reopened and extended until March 13, 1992. 57 FR 6767 (Feb. 27, 1992). RSPA later reopened the comment period until April 20, 1992. 57 FR 11984 (Apr. 8, 1992).

The City's October 10, 1991 application (NYC Appl.) and its further comments of January 16, 1992 (NYC Reply), March 12, 1992 (NYC Rebuttal), and April 17, 1992 (NYC Final) include affidavits, deposition testimony and studies submitted in the Federal court litigation, as well as further materials prepared or assembled for this application. Comments supporting a waiver of preemption (many of which were included as exhibits to the City's submissions) were received from many elected officials representing New York at the Federal, state and local government levels, New York City community groups, and other organizations and individuals.

Extensive comments and materials in opposition to the City's application were submitted jointly by American Trucking Associations, Inc., National Tank Truck Carriers, Inc., and National Paint and Coatings Association, Inc., (collectively "Industry Group"), on December 13, 1991, March 13, 1992, and April 20, 1992. These materials (referred to as "Ind. Group-Dec," "Ind. Group-Mar," and "Ind. Group-Apr" for convenience) also include affidavits, deposition testimony, and studies from the Federal Court litigation, as well as separate critiques of, or responses to, portions of the City's submissions. Additional opposing comments (some of which were included as appendices to the Ind. Group-Dec submission) were also provided by numerous associations and companies in the trucking, petroleum, paint, chemicals, chemical waste, and compressed gas industries, as well as a U.S. Senator and a U.S. Representative, both from New Jersey.

All these materials have been carefully considered in reaching a decision on the City's waiver application. Where relevant, RSPA also has considered materials and comments submitted in Docket Nos. IRA–40A (IR–22 and appeal), IRA–40B (IR–23 and appeal), and HM–183. Docket No. HM–183 was a RSPA public rulemaking proceeding which resulted in significant amendments to RSPA's regulations pertaining to the manufacture, qualification, maintenance and use of cargo tank motor vehicles. See, *e.g.*, 50 FR 37766 (Sept. 17, 1985), 54 FR 24982 (June 12, 1989), and 55 FR 37028 (Sept. 7. 1990).

The comments of both the City and the Industry Group refer to all of these proceedings. The City and the Industry Group participated, and received all submissions, in IRA–40A&B. The City's Department of Environmental Protection

submitted letter comments and the 1987 A.D. Little study (Exhibit 5 to the City's application herein) in Docket No. HM–183; many others who submitted comments on the City's waiver application also provided comments in HM–183.

RSPA has reviewed other publicly available materials for further information relevant to the issues raised by the City's application. Such materials include publications, reports and data of (or in some cases prepared for) the U.S. Government, including RSPA, FHWA, National Highway Traffic Safety Administration (NHTSA), National Transportation Safety Board (NTSB), Bureau of the Census, and the Department of Energy; reports and data of The University of Michigan Transportation Research Institute (UMTRI); and the J.J. Keller & Associates, Inc., Vehicle Sizes & Weights Manual.

III. Discussion and Analysis

A. Equipment Requirements—Flammable and Combustible Liquids

The vast preponderance of the arguments and supporting materials address the purpose and effects of the City's limitations on the size and types of tank trucks that pick up and deliver gasoline and fuel oil. These "petroleum-based products" make up at least 90% of the flammable and combustible liquids transported by tank trucks in the City. NYC Appl. 36. According to the City's figures, about twice as much fuel oil as gasoline is used in the City each year. NYC Appl. Ex. 5, p. 3–5. On the other hand, "fuel oil is not as dangerous as gasoline * * *" NYC Rebuttal 3.

The main focus of the City's comments on safety (*i.e.*, whether the City's requirements provide at least an equivalent level of protection to the public) is on the harm that can result from an accident involving a gasoline tank truck, including the potential for release of gasoline with the possibility of a fire or explosion. Accordingly, the major part of the discussion which follows concerns the parties' arguments with regard to the relative "risks," or levels of protection to the public, from gasoline tank trucks allowed under City and Federal regulations. Where there are significant differences with respect to other flammable liquids, or with respect to fuel oil and other combustible liquids, those differences are mentioned; otherwise, RSPA's consideration of the arguments relating to gasoline tank trucks will be dispositive of issues relating to trucks carrying other hazardous liquids.

1. Tank Trucks and the Liquids Carried

a. *Trucks allowed under City and DOT regulations*—All trucks used by interstate carriers of hazardous materials are subject to the Hazardous Materials Regulations, including requirements for packaging of the materials. 49 CFR 171.1, 173.3. Thus, the City's regulations are in addition to Federal standards. For convenience, this discussion contrasts "City trucks" and "DOT trucks" in various respects. The former term is meant to refer to trucks which are covered by both sets of regulations; "DOT trucks" refers to trucks which are allowed to transport flammable and combustible liquids everywhere else in the United States because they comply with DOT requirements and, in the absence of the City's requirements, would be allowed to pick up and deliver in the City as well. (The small category of solely intrastate carriers, not presently covered by the HMR, is not considered in this discussion.)

Several Federal specifications apply to tank trucks carrying flammable liquids. 49 CFR 173.119. The MC–306 type cargo tank (including predecessor specifications) "is the major highway transport vehicle used to transport flammable and combustible liquids, such as gasoline and fuel oils." 50 FR at 37767. Effective December 31, 1990, Federal specification MC–306 was replaced by specification DOT–406, for new construction. See 55 FR 37028. Tank trucks may not be built to specification MC–306 after August 31, 1993. 49 CFR 180.405(c)(1). The MC–306 trucks already in service may be used after that date, but they must have their "pressure relief devices and outlets" modified to meet the DOT–406 requirements. 49 CFR 180.405(c)(2).

Tank trucks carrying fuel oil and other combustible liquids must meet general regulations in the HMR covering packagings (strong and tight packagings that do not leak), empty packagings, loading and unloading, placarding, and motor carrier safety. See NYC Appl. 12; 49 CFR 173.118a(b). As already noted, many tank trucks used for fuel oil outside the City are designed to the same specifications as tank trucks which carry flammable liquids. This allows the same truck to be used for both types of products, including mixed loads of gasoline and diesel fuel, in different compartments, at the same time.

The City's requirements on tank truck design and construction, for which it seeks a waiver of preemption, relate to: (1) Truck body style (single-unit vehicles for flammables, no full-trailers for combustibles), (2) steel tanks, (3) elliptical tanks (for flammables), (4) compartments (for flammables and combustibles other than heavier grades of fuel oil), (5) longitudinal baffles (for flammables and heavier grades of fuel oil), and (6) tank capacity limits (4,000 gallons of flammables, 4,400 gallons for combustibles, and 6,500 gallons for heavier grades of fuel oil). In contrast, the DOT specifications for cargo tanks allow:

—Any truck body style, including semi- and full-trailers so long as they meet highway weight limits as discussed below;

—The tank to be either aluminum or steel of specified alloys and thicknesses; these include certain types of steel not allowed by the City, such as stainless steel, although the City states that it is amending its regulation to "permit the types and grades of steel that are specified in the federal regulations, * * *" NYC Final Ex. 39, p.2 n.1;

—Circular as well as elliptical tanks, although virtually all gasoline tanks are now elliptical or oval in shape, Botkin Dec. 2, 1987 Dep. 91 (Ex. D to Goodman Jan. 29, 1988 Aff. in Docket No. IRA–40A);

—Tank compartments; compartments are not required, although Mobil states that gasoline trucks nearly always have compartments to allow them to carry different grades of gasoline;

—Longitudinal baffles; and

—Any size or capacity of the tanks so long as the total weight of the truck complies with "federal and local highway and bridge weight limits." NYC Appl. 14. According to the J.J. Keller Vehicle Sizes & Weights Manual, p.NY–2 (1/92), the City limits total truck weight to 73,280 pounds, except on Interstate Highways where the Federal weight limit of 80,000 pounds applies. See 23 U.S.C. 127.

Trucks built to MC–306 and DOT–406 specifications for gasoline and fuel oil are generally semi-trailers with aluminum tanks which allow greater loads to be carried. *Id.* Mobil confirms that "gross weight, rather than capacity, is the determining factor" on tank truck size:

> The typical gasoline trailer which conforms to the Federal weight law of 80,000 pounds (9,400 gallons) * * * is elliptical in shape and has 4 or 5 compartments with not less than 1% additional space for thermal expansion. The industry standard is 3% * * *. Multiple compartments are utilized by the industry to carry various grades and quantities of gasoline on the same delivery. Mobil is not aware of any single compartment gasoline trailers.

The City's maximum weight limit of 73,280 pounds would permit a cargo tank of approximately 8,500 gallons. The A.D. Little study used 8,800 gallons for the capacity of a gasoline or fuel oil tank truck that could be used in the absence of the City's regulations. NYC Appl. Ex. 5, Table 3.1.

In contrast to the DOT truck, a 4,000 gallon City gasoline tank truck weighs approximately 51,560 pounds when fully loaded. *See* NYC Appl. Ex. 15, p. 2 (total of front and rear axle loads). City trucks built in the future may weigh slightly less, since the City is not requesting a waiver of preemption for (and is presumably eliminating) its requirement that the "net chassis weight" (not including the tank) of a 4,000 gallon gasoline truck must be at least "33 percent of the gross vehicle weight" when fully loaded FPD 7–74 § 23–4.

Even if this requirement is eliminated, a loaded City gasoline truck will still weigh more than 40,000 lbs.—when the chassis weight is added to that of 4,000 gallons of gasoline (24,400 lbs., at 6.1 lbs per gallon) and the steel tank (some 9,500 lbs., *see* Letter of Tank Specifications in NTSB investigation report on April 22, 1991 accident in the City). This puts the City gasoline truck in the category of "heavy trucks (defined as more than 26,000 pounds * * *) * * *" NYC Reply 19. A 4,000 gallon truck carrying a heavier liquid than gasoline, or a City fuel oil truck (with its larger tank), would weigh somewhat more.

b. *Pickup and delivery of gasoline and fuel oil*—The City states, and Mobil confirms, that truck deliveries of gasoline and fuel oil tend to be local rather than long distance. Tank farms and storage terminals, in or nearby the City, receive gasoline and fuel oil by barge, tank ship, or pipeline. NYC Reply 10. From those tank farms or terminals, gasoline and fuel oil are delivered "to service stations * * * fire stations, rental car agencies, garages and parking lots, utilities, City agencies * * * trucking companies, taxi and car service facilities, and other commercial establishments." NYC Appl. 18.

There are approximately 3,400 locations "licensed to receive gasoline and diesel fuel." *Id.* Underground tanks, which are required for gasoline, are limited to 4,000 gallons. Rogers Nov. 24, 1987 Dep. 76 (Ex. I to Goodman Jan. 29, 1988 Aff. in Docket No. IRA–40A). It appears that many locations have more than one tank; a service station generally sells more than one grade of gasoline, and many facilities may need more capacity than 4,000 gallons. A 1985 affidavit by Fire Prevention Bureau Chief DeMeo referred to "approximately 40,000" "buried gasoline storage tanks in the City * * *" DeMeo April 15, 1985 Aff. ¶ 31 (Ex. 2 to the City's July 9, 1987 comments in Docket Nos. IRA–40A&B).

Deliveries of fuel oil in the City "are even more pervasive, to virtually every residence and most commercial buildings," more than 89,000 locations (not including one and two-family homes). NYC Appl. 18. "The transportation routes of fuel oil lie in much more heavy commercial/heavy residential areas, * * " than gasoline. NYC Appl. Ex. 5, pp. 1–2. Information as to the size of individual tanks is not included in the materials submitted.

There is no information that gasoline is picked up in the City for delivery elsewhere. However, Castle Oil states that it makes deliveries of fuel oil from terminals located in the City to locations outside the City, for which it uses larger DOT trucks under the variance granted by the City. This variance explicitly provides that "a phase out plan * * * for these vehicles" must be developed and implemented if "the court upholds the City's regulations * * *" Castle asserts that additional sales to buyers outside the City would take place if those buyers could bring larger tank trucks into the City terminals.

c. *Pickup and delivery of other liquids*—Under Federal regulations, chemicals and other non-petroleum products can be transported in various DOT specification cargo tanks, including MC–306, 307, 312 and 331 (and their DOT–400 series replacements). 49 CFR 173.119. For certain products, cargo tanks of stainless steel are used, according to some industry comments. As the City notes, "[s]ome chemicals can corrode aluminum * * *" and caustic agents used for cleaning "would eat into an aluminum tank." NYC Reply 22. In this case, the heavier weight of steel will limit the size of the tank. Empire State Varnish Co. refers to 6,000 gallon tank trucks delivering to its competitors in New Jersey.

Reichhold Chemicals states that it transports resin in MC–307 stainless steel trucks "in and around the New York metropolitan area * * *" and sets forth several ways in which the City's regulations affect it, besides the 4,000 gallon limit on tank capacity: the City prohibits stainless steel tanks, which are "best for product purity"; bans insulated tanks, which are necessary to "keep our lading warm"; "requires small compartments, which are totally unsuited to the type of product we deliver"; and requires gravity discharge even though "resin is not a highly liquid product like gasoline and fuel oil." The City represents that procedures have been initiated to amend FPD 7–74 to limit the requirement for gravity discharge to gasoline, as well as to permit the types and grades of steel allowed in the HMR. NYC Final Ex. 39 ¶ 4, n.1.

There are not as many tank trucks used for paints and chemicals in the City, "compared to the hundreds of gasoline delivery trucks." NYC Rebuttal 3. For some of the companies delivering paints and chemicals, the City has prescribed individual routes and allowed larger tank trucks to operate under variances. *Id.* The City indicates that shipments of paints and chemicals destined for the City originate farther away, and deliveries may be concentrated in industrial areas of the City. *See* NYC Appl. 40; NYC Reply 11,28. The City states that "many chemical companies maintain or use storage terminals and brokers, [from which deliveries are made] rather than shipping directly to customers in the original long-distance truck." NYC Reply 11. Chemical Waste Transportation Institute (CWTI) states that chemical wastes are transported from the City, "to treatment, storage and disposal facilities * * * geographically remote from the City."

d. *Alleged conflicts with Federal standards*—The Industry Group asserts that the City trucks were not designed to meet Federal standards, have not been inspected against those standards and, in fact, fail to meet them in one or more respects. *See* Ind. Group–Dec 9–10; Ind. Group–Mar 1–11. Among the specific allegations made about City trucks are that they (1) must be "fillet-welded pursuant to the City regulation, rather than butt-welded as is accepted by DOT * * *"; (2) "cannot maintain a speed safe for highway use * * * and exceed federal weight limitations * * *"; (3) "lack disc brakes * * *"; and (4) "do not meet the venting standards of the HMR * * *" and have " 'worthless' rollover protection." Ind. Group–Dec 9–10.

The City responds that many of these "design features [have been] relinquished in favor of the DOT specifications," NYC Final 2, and that trucks "built to the City's former specifications * * * are still safe. These trucks that can now be modified to incorporate the newly applicable federal designs for valves, hatch covers, etc., will be so modified, over time. For others, a 'grandfather' provision may be necessary * * *" NYC Reply 26.

The City's best information appears to be that all City gasoline trucks and the newer fuel oil trucks are DOT specification MC–306 type cargo tank vehicles, and the gasoline trucks bear DOT specification plates. *See* RSPA

Feb. 27, 1992 letter in the docket with attached memoranda of RSPA telephone conversations with the City's counsel. However, the manufacturer of tanks for City gasoline trucks has acknowledged that DOT specification plates were placed on vehicles which were not designed to meet DOT requirements. Ind. Group–Mar 6.

The 4,000 gallon City gasoline tank trucks presently in use appear to violate highway weight limits. According to materials submitted by the City, a loaded City gasoline truck has 37,976 pounds on its back two "tandem" axles. NYC Appl. Ex. 15, p.2. However, the Federal limit is 34,000 pounds on the tandem axles. 23 U.S.C. 127. City trucks exceed even the City's own weight limit of 36,000 pounds for tandem axles. See J.J. Keller Vehicle Sizes & Weights Manual, p.NY–2 (1/92).

Until recently, the City seems to have ignored Federal standards, believing that it its "more stringent" design requirements were met, "the less demanding federal standards" would also be satisfied. NYC Reply 25–26. The City virtually admits that annual Fire Department inspections have not considered DOT's requirements. *Id.* 26. The conditions cited by the Industry Group as violating the HMR appear to have been required by FPD provisions for which the City is not seeking a waiver, or allowed by the City's failure to enforce the HMR.

The City represents that it is eliminating many of its requirements, including some which were in conflict with the HMR, and it will now inspect for DOT's standards as well as the City's requirements. *Id.* The FPD provisions for which the City requests a waiver do not appear to require any conditions which violate Federal specifications. These FPD provisions impose as requirements conditions which simply are allowed, or are optional, under the HMR. Granting the City's application would eliminate the truck operator's options under the HMR (of having a larger tank, made of aluminum, on a semi-trailer, etc.) if it desires to pick up and deliver flammable and combustible liquids in the City. To decide the City's application, then, RSPA must determine whether the elimination of those options will (1) afford an equal or greater level of protection to the public and (2) unreasonably burden commerce. Those issues are addressed in the sections which follow.

RSPA's decision on the City's application will determine whether DOT trucks previously prohibited by the City's rules will be allowed to operate there. However, the decision will not, by itself, allow or prohibit the continued operation of City trucks now being used. In this case, all trucks used in the City, and elsewhere, must continue to meet DOT standards. Existing City trucks' actual compliance with the HMR is not determinative as to whether RSPA should grant a waiver of preemption.

2. Safety Evaluation of City and DOT Tank Trucks

The City argues that its tank truck design and construction requirements afford greater protection to the public, than Federal regulations in two respects: (1) Semi-trailer DOT trucks with larger tanks will have many more accidents than City trucks over the same number of miles, and (2) when the larger DOT trucks have accidents, the consequences of those accidents are much greater. Materials submitted by the City specifically assume that a reduction in mileage will result in a proportional reduction in accidents, because DOT trucks, with larger tanks, would make fewer trips to transport the same amount of flammable and combustible liquids. NYC Appl. Ex. 5, pp. 5–26 to 5–27; *id.* Ex. 15 pp. 5–6. However, the City asserts that this potential reduction in accidents is more than offset by an increase in accident frequency and consequences with the larger DOT trucks. *Id.* 25–26.

Opponents of the City's application dispute both parts of the City's argument. They deny that the design features of DOT trucks will result in more or worse accidents than with City trucks, and they challenge the A.D. Little study's efforts to quantify and factually support each of these conclusions. They contend that the reduction in mileage associated with fewer trips will reduce accidents. Ind. Groups-Dec 28–29, citing *Kessel* v. *Consolidated Freightways Corp.*, 450 U.S. 662, 675 (1981). Opponents also assert that most releases of hazardous materials occur during loading or unloading, and that fewer trips will reduce the number of those incidents. The City does not contend that larger DOT trucks will have a higher rate of releases during loading and unloading.

a. *Potential damage from accidents*— The nature of accidents and the consequences thereof can be seen in data compiled by FHWA. All accidents involving commercial motor vehicles resulting in death, serious injury or more than $4,400 property damage must be reported to FHWA. 49 CFR 394.3, 394.9. Among the information required to be reported is the type of vehicle, whether or not it was carrying hazardous materials, and whether hazardous materials were released, caught on fire or caused an explosion.

In 1989, the most recent year for which computerized data are available from FHWA, tank trucks carrying all types of hazardous materials were involved in a total of 1020 reported accidents throughout the U.S., in which 91 people died, 641 people were injured, and the total property damage was $20.4 million. Of the 1020 tank truck accidents, 212 involved hazardous materials releases; these 212 accidents resulted in 24 deaths, 84 injuries and $8.6 million property damage. This shows that the hazardous materials do not cause most of the damages, because (1) the majority of accidents involving tank trucks carrying hazardous materials did not result in releases of those materials, and (2) the majority of fatalities, injuries and property damage occurred in accidents when there was no release.

With regard to the majority of accidents which involve a release of hazardous materials, the FHWA data do not reveal whether deaths, injuries and property damage resulted from the release of the hazardous materials or from the impact of the collision itself. Data compiled by RSPA are available, however, to help assess this issue. A written report must be made to RSPA of any unintentional release of hazardous materials, including any incidents during transportation when a person is killed or injured "[a]s a direct result of hazardous materials * * * " 49 CFR 171.15(a), 171.16(a).

Reports to RSPA indicate that, throughout the U.S. during 1989, eight persons died and 217 were injured as a direct result of the highway transportation of hazardous materials in an accident. See RSPA's 1990 Annual Report on Hazardous Materials Transportation, Ex. 3, p.42. (These figures include all truck types, not just tank trucks). The figures for 1989 are consistent with the nationwide average of approximately 11 deaths and 200 injuries per year as a direct result of the highway transportation of hazardous materials, over the 1983–90 period. *Id.* Preliminary figures for 1991 show that 10 persons died and 332 were injured as a direct result of highway transportation of hazardous materials.

The 10 deaths in RSPA's 1991 preliminary figures for the entire U.S. include five persons who died in a May 1991 accident in the Bronx, involving a City gasoline tank truck and an automobile. Besides this accident, the City's application and accompanying materials document four other accidents in the City since 1988 involving City gasoline trucks; in two of these four,

gasoline was released and caught fire when the tank truck overturned, and occupants of the vehicles in the collisions were injured. Based on all the information available to RSPA, it appears that the injuries in both those accidents were caused by the impact of the collision itself, and not the fire. During the same period, there were two accidents involving City fuel oil trucks. Even though oil was spilled in each case, there was no fire, and the only injuries appear to have been minor ones suffered by emergency personnel responding to one of the accidents. NYC Appl. Ex. 11.

Both the City and opponents of its application focus on the May 1991 accident in the Bronx. The City's argument that, if a larger DOT tank truck were involved in such a collision, "damage could be expected to be commensurately greater," NYC Appl. 17, is discussed in detail below. The Industry Group contends that compliance with Federal requirements on protection for tank closures or fittings might have prevented the release of gasoline which caught fire. Ind. Group-Mar 8. However, as indicated earlier, there is nothing in the City's requirements that excuses compliance with DOT standards in this regard, nor does the City impose requirements in this regard beyond those of DOT.

Releases of hazardous materials during loading or unloading must also be reported to RSPA (although not to FHWA). See 49 CFR 171.15(a), 171.16(a). Nationwide data compiled by RSPA for 1990 and 1991 indicate that some three-fourths of all releases of hazardous materials from tank trucks occurred during loading or unloading, although traffic accidents accounted for much more damage (including deaths and injuries) than releases during loading and unloading.

In the City as well, most releases of hazardous materials occur during loading or unloading. RSPA received reports of 51 incidents of a release of hazardous materials from a tank truck in the City, during the ten-year period from 1982 through 1991. All of these incidents involved City trucks; in 37 incidents the trucks carried gasoline, in three cases they carried fuel oil, and 11 times the trucks carried other hazardous materials. Only three of the reported incidents (all gasoline trucks) involved traffic accidents. All but two of the remaining 48 occurred during unloading (including two cases when an automobile ran over a hose or struck a tank fitting during unloading); in the last two cases, corrosive materials escaped from a valve or hatch cover that was not securely closed after loading or unloading.

The City's Exhibit 35, from the New York State Department of Environmental Conservation, confirms that only a small fraction of releases result from traffic accidents. Human error, equipment failure, and tank overfill cause most releases. During 1990, tank truck releases in the City (Region 2, see NYC Reply 13) resulted from accidents in only eight cases, or 7.4% of the total number of 108 incidents. For 1991, accidents caused four tank truck releases in the City, 2.8% of the 142 total.

The accident data from FHWA and RSPA demonstrate that deaths, injuries and property damage directly resulting from hazardous materials account for only a small portion of the total deaths, injuries and property damage from accidents involving trucks carrying hazardous materials. This conclusion is consistent with estimates of the number and results of accidents involving gasoline tank trucks in the Batelle report ("An Estimate of the Risk of Transporting Gasoline by Truck," November 1978, for the Department of Energy by Pacific Northwest Laboratories, operated by Batelle Memorial Institute).

For calendar year 1980, nationwide, the Batelle report estimated:

—1,710 accidents involving gasoline tank trucks (p. 10–1);

—110 of these accidents would result in a release of a significant amount of gasoline (*id.*);

—There would be 29 deaths from the release of gasoline in these accidents, of which 12 would be the drivers of the gasoline trucks and 17 would be occupants of other vehicles involved in the accident (*id.* p. 10–3, 1–2);

—In the total of 1710 accidents, another 26 "traffic fatalities would be expected * * *" unrelated to the hazardous nature of the cargo (*id.* p. 10–3).

The Batelle report found a very small probability of death for persons other than the occupants of the accident vehicles, *id.* p. 9–7, and it estimated that only "one in a thousand releases will result in a serious explosion." *Id.* p. 9–11.

Opponents of the City's application assert that the number of accidents is directly proportional to mileage. As Mobil states: "Larger payloads mean fewer trucks, fewer trips, fewer miles travelled, and less exposure to accidents or incidents." See also Ind. Group-Dec 28–29 and comments by United Transport America (UTA), Chemical Manufacturers Association (CMA), and Independent Fuel Terminal Operators Association (IFTOA). The Industry Group notes that certain materials submitted by the City adopt this approach. *Id.* citing NYC Appl. Exs. 5, 15. The City seems to agree that, in the absence of other factors, "that argument might have some weight." NYC Appl. 25. The next sections analyze the factors which, according to the City, result in a greater accident frequency, and more damage in those accidents, for DOT trucks than for City trucks.

For purposes of that analysis, it is not necessary for RSPA to make a specific finding that, under any given conditions, accidents and damages will actually be reduced. The issue is whether the factors advanced by the City offset the likely reduction in the number and severity of accidents and releases of hazardous materials, if DOT trucks (with larger tanks) were allowed to pick up and deliver the same amount of materials in fewer trips with less mileage. Based on the above discussion of accident data, that likely reduction of consequences applies to all of the following situations:

—Accidents and associated damages (deaths, injuries and property damage) involving tank trucks carrying hazardous materials, when there is no release of the hazardous materials (the majority of accidents involving such trucks);

—Accidents and associated damages involving tank trucks carrying hazardous materials, when there is a release of the hazardous materials, but the hazardous materials do not cause the deaths, injuries and property damage (a substantial portion, if not the majority, of the accidents when hazardous materials are released);

—Accidents and associated damages involving tank trucks carrying hazardous materials are released and cause the deaths, injuries and property damages (a small portion of the accidents involving tank trucks carrying hazardous materials); and

—Incidents and associated damages when hazardous materials are released during loading or unloading of tank trucks (most of releases but resulting in a much smaller portion of the damages).

b. *Accident frequency*—The City contends that its smaller, straight gasoline trucks are less susceptible to being involved in accidents, for three reasons: (1) "Semi-trailer and tractor-trailer combinations have a tendency to jackknife, which, of course, a straight chassis truck cannot do." NYC Appl. 24. (2) Larger DOT trucks are more likely to overturn because of a higher center of

gravity and the lack of a requirement for baffles. *Id.* 23. (3) "[D]riving conditions are more difficult * * *" in the City. *Id.* 25. Opponents of the City's application minimize the danger of a jackknife accident; point to the lower number of rollover accidents in urban areas; state that baffles are not needed because most deliveries of gasoline are of full compartment loads; and allege that semi-trailers are more maneuverable and are being successfully used in many areas of the City.

The first factor, tendency to jackknife, applies only to tank trucks for flammable liquids, since the City already permits combustible liquids to be carried in semi-trailers. The City submitted a study showing that during a three-year period 25% of all truck accidents in the City "were of the jackknife type; * * *" NYC Appl. 24; see also Ex. 13. Another survey by the City, of incidents involving tractor-trailers during 1983, found that 59% of jackknife accidents occurred when the trailer was empty, when there was no potential for a large release. NYC Appl. Ex 6; *see* Ind. Group-Dec 32.

Matlack alleges that a jackknife accident will cause less damage by dissipating energy. CWTI states that the level of safety is better with a semi-trailer, because a semi-trailer may jackknife when a single-unit truck would roll over. Matlack, Mobil, American Petroleum Institute (API), and TUA, as well as the Industry Group, all assert that semi-trailers are presently being used successfully in many areas of New York City. *Id.* 32.

It is not necessary to make findings on these assertions, since the general result of a jackknife accident (either single or multi-vehicle) appears to be traffic congestion, rather than a release of hazardous cargo. The City admits as much, alleging that such incidents "have serious economic consequences and must be considered in an assessment of risk." NYC Reply Appx. A p. 6. The City's A.D. Little study mentioned that "these types of accidents generally do not lead to major spills. Therefore, the effect of jackknife accidents on spill frequency and, consequently, on risk is neglected." NYC Appl. Ex. 5 p. 5–26 n.2. Moreover, as discussed below, the available data do not show that the overall accident frequency for straight cargo tank trucks is less than that for semi-trailers.

Overturn or rollover accidents are less common than jackknifes; however, their potential for damage is far greater. RSPA has noted that "failures of the tank shell, manhole closures and pressure relief valves occur frequently in cargo tank overturn accidents. In a substantial number of instances, these failures resulted in serious leakage, sometimes resulting in fires." Notice of Proposed Rulemaking in Docket No. HM–183, 50 FR 37766, 37768. RSPA's revised regulations included new design requirements for rollover protection, for new construction, and modification of closures and fittings on existing cargo tanks.

However, the City's own studies fail to establish that overturns account for a large number of total accidents, or that tractor-trailers overturn more frequently than straight trucks. Its study of all truck accidents over three years discovered that 7% of accidents were overturns (NYC Appl. Ex. 13), while its survey of trailer-tractor accidents in 1983 reported 18 overturns out of 311 accidents, or 5.8% when one eliminates occasions when a truck simply breaks down or becomes disabled. NYC Appl. Ex. 6.

Both Prof. Ervin of UMTRI (NYC Appl. Ex. 15) and Mr. Pesuit (comments of D.R. Pesuit & Associates in Docket No. IRA–40A) have predicted an increased likelihood of rollover for the larger, higher center of gravity, DOT-specification truck. Neither researcher, however, concludes that this necessarily increases the total number of truck rollover accidents; other compensating factors can intervene.

In his comments, Pesuit calculates from their geometry that City trucks can go faster in a turn before overturning than can DOT trucks. His calculations show that the difference between the two types of trucks, in the speeds at which they will roll over, "is not great for sharp turns on city streets, but it is quite significant for the gradual curves found on highway exit ramps * * *" However, it is those "gradual curves found on highway exit ramps * * *" which are uncommon in the City. "[E]ven the limited access highways were largely constructed prior to the development of federal standards for such aspects as the turning radius of exit ramp curves, * * *" NYC Appl. 25. DuPont also asserts that truck drivers become familiar with the "threshold" speed for each type of truck and one should not expect the number of rollover accidents to change simply from a different truck design.

Ervin indicates that the proportion of single-vehicle accidents from rollovers increases from 27% to 50%, when one compares the City's 4,000 gallon gasoline tank truck with the larger DOT MC–306 truck. However, his example comparing data on 3,000 and 4,000 gallon trucks produces a lower number of rollover accidents because he assumes that the larger tank capacity allows the same deliveries to be made with fewer trips. This means less exposure to accident situations and fewer total accidents, even though rollovers, as predicted by Ervin, are a larger fraction of that total. See NYC Appl. Ex. 15, pp. 5–6. Similarly, if one applies Ervin's approach to a comparison of the City's 4,000-gallon truck and an 8,500-gallon DOT truck, the predicted number of rollover accidents for the DOT truck is less than that for the City truck, due to the reduction in mileage which reduces the exposure to accidents.

The City separately contends that, since DOT's specifications do not require longitudinal baffles, the "slosh" of liquid in partially loaded compartments will also result in more rollover accidents. There are two deficiencies in this argument. First, Ervin's rollover frequency rates purport to be based on historical experience. *See id.* p. 4. Therefore, Ervin's rollover frequency for the DOT MC–306 truck is based upon those trucks actually in operation, with or without baffles. An assumed lack of baffles cannot be an independent ground to find that DOT trucks will have more rollover accidents. Second, according to Mr. Botkin, an official of Fruehauf Trailer Corp., "gasoline is normally ordered and delivered in bulk quantities and thus there is no opportunity to develop lateral surge when a compartment is either nominally full or empty." Botkin Aff. ¶ 7 (Ind. Group-Dec Appx. 4). In the circumstances examined by Prof. Ervin and others in a 1980 University of Michigan study, only "13 percent of the gasoline hauling mileage occurs under the defined sloshing condition" of one or more compartments being between 20% and 80% full. Ervin et al., "Future Configuration of Tank Vehicles Hauling Flammable Liquids in Michigan," 1980, Report No. UM–HSRI–80–73 (hereinafter "1980 Michigan study"), p. 223.

The comments and 1986 report of The New York State Automobile Association, entitled "Truck Safety Shortcomings," NYC Reply Ex. 29, provide no support for the City's contention that DOT trucks have a higher rate of accidents. The City refers to a finding in that report that "heavy trucks (defined as more than 26,000 pounds * * *) are involved in proportionally more accidents * * *" than smaller trucks. NYC Reply 19. But neither that report nor the City explains how such a finding means that City trucks weighing 45,000–55,000 lbs. will have fewer accidents than DOT trucks weighing up to 73,280 lbs. The fatal crash rates portrayed in that same report (p. 4) are not relevant, since they cover all truck types and include both

"medium" (10,000 to 26,000 lbs.) as well as "heavy" single-unit trucks in the comparison to tractor-trailers. (See truck definitions at p. I–5 of the DOT Study "Large Truck Accident Causation," July 1982, DOT HS 806 300, while is cited as the source for the chart at p. 4 of the Automobile Club report.)

When "heavy" cargo tank trucks (above 26,000 lbs. gross vehicle weight) are considered, it does not appear that single-unit trucks are likely to have substantially fewer fatal accidents than semi- and full-trailers. Information on fatal accidents by truck body type is contained in UMTRI's annual survey of Trucks Involved in Fatal Accidents (TIFA), based on data from NHTSA, FHWA, state police accident reports, and follow-up telephone interviews. The most recent published TIFA report is for 1987. The most readily available source of annual truck mileage by truck body type is the Census Bureau's Truck Inventory and Use Survey (TIUS), which is compiled every five years; again the most recent edition is for 1987.

To analyze fatal accidents for heavier tank trucks, RSPA needed more detailed information than is contained in the published reports. In response to RSPA's request, UMTRI advised that single-unit straight tank trucks over 26,000 lbs. had been involved in 62 fatal accidents in 1987; tractor-trailer tank trucks were in 292 fatal accidents in the same year. (Except for three of "unknown" weight, all tractor-trailers in fatal accidents were more than 26,000 lbs.; to be conservative, these three were assumed to be more than 26,000 lbs.) Estimated mileage for tank trucks over 26,000 lbs. was obtained from computer tapes of 1987 TIUS data (which tapes are available to the public). From this nationwide information, RSPA calculated the following fatal accident rates during 1987 for single-unit and tractor-trailer cargo tank trucks over 26,000 pounds:

1987 U.S. FATAL ACCIDENTS CARGO TANK TRUCKS—26,000 LBS.+

	Fatal accidents	Annual miles (000,000)	Fatal accident rate
	(TIFA)	(TIUS)	(100 million miles)
Single-units	62	9,080	6.53
Tractor-trailers	292	51,334	5.69

NOTE.—Straight trucks pulling trailers or other vehicles have been excluded from both the TIFA and TIUS data.

This comparison shows that, for cargo tank trucks above 26,000 pounds, tractor-trailers did not have higher rates of fatal accidents than straight trucks. Assuming that the tractor-trailers have larger tanks than single-unit trucks, this would mean fewer accidents with tractor-trailers for the same amount delivered, since there would be fewer trips and fewer miles.

Even accepting the City's contention that driving conditions are more difficult in the City than elsewhere, RSPA has found nothing in the submitted materials to relate this condition to a higher rate of accidents for DOT trucks. In fact, the City asserts that smaller trucks would still be used because downtown traffic, narrow streets or other conditions make them appropriate. NYC Appl. 38. CWTI agrees that:

> No motor carrier is going to risk damage to expensive equipment and the possibility of an incident with its liabilities by sending equipment to points in the City that cannot be safely accessed. On the other hand, there are locations in the City where articulated vehicles can operate safely.

API similarly notes that, in the absence of the City's requirements: "The Borough of Manhattan would probably be served by a mixture of tractor-trailers and straight trucks with capacities from 4,000 to 9,000 gallons." API also states that many parts of the City, particularly in the Bronx, Queens, and Staten Island, can easily be served by semi-trailer trucks.

In summary, RSPA cannot find support for the City's contention that DOT trucks have a higher overall accident frequency than smaller trucks which meet the City's design and construction requirements. The City has not established that DOT trucks will have more rollover accidents than City trucks, when the potential for reducing the number of pickup and delivery trips, and thereby the total number of accidents, is considered. The City's stated goal of reducing traffic congestion, by banning tractor-trailers to prevent jackknife accidents, does not outweigh the potential reduction in the other types of accidents (rollovers, collisions) that are more likely to result in fatalities, injuries and releases of hazardous materials.

c. *Accident results and damage*—The City's argument that a catastrophe is more likely to result from an accident involving a DOT truck, as compared to a tank truck meeting City requirements, is essentially based on a premise that more product will cause more damage: "The less fuel is available to feed a fire, the more easily and faster it can be extinguished." NYC Appl. 14.

According to the City, both smaller tanks and the presence of compartments will limit the amount of a spill. The City also contends that the aluminum tank of a DOT-specification truck is more likely to rupture or puncture than a steel one and, once a fire starts, likely to melt so that the entire contents of the tank burn. *Id.* 20–22. Because the City is so densely populated, "especially stringent rules [are needed] to limit the potentially catastrophic impact that might occur to a gasoline or fuel oil truck or tank truck of extremely hazardous gas." *Id.* 19. The City says its "bottom line" (NYC Reply 20) is:

> Any accident, however minor, has the potential to create enormous damage, from lost time due to tied-up traffic in the midst of thousands of cars, to lost lives in a flaming fireball in the midst of thousands of people. Therefore, keeping the trucks small—even if it did not decrease the number of accidents—limits the damage that any accident can do, and, by that fact alone, increases safety to the public.

But the City does not provide support for its contention that, when more gasoline, fuel oil or other hazardous liquid is released, "damage could be expected to be commensurately greater." NYC Appl. 17. While the City asserts that a fire fed by a larger quantity of gasoline "would surely cause more damage in New York City," NYC Reply Appx. A p. 10 it does not "attempt to quantify the increase in damage * * *," *id.*, except in the A.D. Little study.

However, the available authorities indicate that it is the occupants of the vehicles in an accident involving a gasoline truck who are most at risk; fatalities to other persons are rare, and the expected damage is not proportional to the amount of flammable or combustible liquid released. Moreover, the City has not submitted any evidence to substantiate its claim that, in densely populated areas or elsewhere, an accident involving an 8,500 gallon gasoline truck will cause significantly more damage than an accident with a 4,000 gallon City truck.

Even the City's A.D. Little study does not assert that the amount of damage is directly proportional to the amount of gasoline or fuel oil released in an accident. A.D. Little calculated "impact factors" for releases of gasoline and fuel oil to "take into account both the relative damage caused by various scenarios * * * and the relative likelihood of these scenarios, given that a spill occurs." NYC Appl. Ex. 5, p. 5–3. In Appendix C, it sets forth examples of the impact factors for releases of 500 gallons and 4,000 gallons.

The Industry Group has challenged A.D. Little's impact factors as "subjective" and "unverified." Ind. Group-Dec Appx 6, pp. 10–11. For

purposes of this discussion, however, it is useful to point out that the impact factors for a release of 4,000 gallons of gasoline or fuel oil are generally 2.5 to 3.0 times as large as the impact factors for a 500 gallon release. See NYC Appl. Ex. 5, Appx. C. If damage were proportional to the amount of materials released, the impact factors for a 4,000 gallon release would be eight times as large as those for a 500 gallon release. In an affidavit submitted by the Industry Group, Dr. Leuba compared A.D. Little's impact factors for other quantities of assumed releases of gasoline to show that the impact factor did not increase in proportion to the increase in the quantity released (*i.e.*, "spill size"), Ind. Group-Dec Appx. 2 (Appx. C, Table 1). In short, even if the damage from a release of a larger amount increased as much as A.D. Little assumes it does, there is an even greater potential for reducing accidents by reducing trips and miles with a larger capacity tank.

Addressing the City's argument that "damage could be expected to be commensurately greater," for a larger quantity of gasoline released, NYC Appl. 17, Dr. Leuba state that this logic, "taken to its extreme, would suggest that the ideal tank truck was one whose capacity was so low that if its entire contents were spilled the resulting fire could be extinguished by a passerby without any appreciable difficulty." Ind. Group-Dec Appx. 2 (Appx. A). The issue here is the relative risks of different size trucks, including the number of trips each must make to pick up or deliver the amount of hazardous materials used by the City's residents.

Ervin and his co-authors note in the 1980 Michigan study (p. 18):

> The consensus of the fire-fighting community seems to be that the threat to life posed by large gasoline fires is not dependent upon tank size, when tank capacity exceeds a few thousand gallons. As stated in the manual of the National Fire Protection Association (NFPA), "The danger from a gasoline fire is not in direct proportion to the quantity of gasoline. One thousand gallons of gasoline released to burn in the street would be sufficient to kill everyone trapped in the flames. Four thousand gallons, while presumably covering a larger area, would certainly not be expected to cause four times the number of fatalities. Reasoning on this basis, the NFPA Standards have not recommended any limitation on the maximum size of tank trucks."

In their letter (NYC Reply Ex. 36), Staff Chiefs of the City's Fire Department point out that the very statement in the NFPA manual reads:

> Tank truck traffic through congested districts of cities should be avoided as much as possible, since any fire is likely to have more serious consequences in congested districts than in sparsely settled areas. Bypass routes, such as commonly specified for all kinds of through traffic, are the obvious solution to the particular problem.

However, this principle is similar to a Federal requirement that motor vehicles containing hazardous materials "must be operated over routes which do not go through or near heavily populated areas, places where crowds are assembled, tunnels, narrow streets, or alleys" when there is a "practicable alternative * * *" 49 CFR 397.9. If a practicable alternative is available, gasoline trucks (of any size) must avoid such areas. Neither the NFPA Manual nor § 397.9 supports the City's prohibition against tank trucks larger than 4,000 gallon trucks throughout the City, while allowing tank trucks up to that size to pick up and deliver flammable and combustible liquids.

As discussed in section A.2. of this part III, above, the Batelle report projected 29 deaths nationwide during 1980, as a direct result of the release of a significant amount of gasoline in 110 accidents. This analysis was based on certain assumptions as to the amount of gasoline which would be released in an accident, and it used three "release fractions" to represent a significant release: 8,400 gallons (the entire tank contents), 4,200 gallons (half of the entire tank), and 3,000 gallons (more than ½ of a compartment). Batelle report p. 8–20. It also evaluated the sensitivity of its results to changes in a number of the factors "that contribute to the risk," *id.* p. 10–6, and specifically found that the probable number of deaths did not vary with the amount of gasoline released. Assuming a release of 8,400 gallons of gasoline in all instances "has a negligible effect on the risk spectrum and the expected number of fatalities." *Id.* p. 10–10.

In other words, Batelle found that greater damage was not likely from a release of 8,400 gallons of gasoline, about the amount that would be transported by a DOT truck in the absence of the City's requirements, than from a release of 4,200 gallons, the approximate capacity of a City truck.

The City separately alleges that the aluminum tank of a DOT truck is more likely to rupture or puncture than the steel tank of a City truck, and that, once a fire starts, an aluminum tank will always melt so that the entire contents of the tank are consumed. NYC Appl. 20–22. However, the available evidence does not support the City's ultimate position that the increased damages from accidents involving DOT trucks with aluminum tanks are so great as to offset the potential for a reduction in accidents overall, when larger capacity tanks allow fewer trips and fewer miles.

In comments and other materials on the issue of whether an aluminum tank is more susceptible to a puncture, both the City and its opponents rely upon a formula to measure the resistance of a metal plate to a probe. *See* NYC Appl. Ex. 5 (A.D. Little study), p. B–6; NYC Reply Appx. 1–A (Hansen Aff.); NYC Final Ex. 37 (Chan Mem.); Ind. Group-Mar 13–16; Ind. Group-Apr 2. The source of this formula is Sandia Laboratories' 1976 report, "Severities of Transportation Accidents," jointly sponsored by the U.S. Energy Research and Development Administration and DOT (Sandia report). See NYC Appl. Ex. 5, pp. 7–1, B–6.

According to the City's submissions, the Sandia report formula will allow a comparison of "the V/R ratio (velocity of impact to probe radius)" for aluminum and steel to determine the relative puncture resistance of the two materials. Hansen Aff. ¶ 4. Two factors on which the result depends are the yield strengths and the thicknesses of the metals being compared. The initial argument between the parties was over the correct numbers to use for the yield strengths of aluminum and steel; their present disagreement focuses primarily on the thicknesses to assume for an aluminum tank in a DOT truck. The essence of the parties' calculations is that, using 26,000 lbs. per square inch (psi) and 36,000 psi as the yield strengths of the aluminum and carbon steel commonly used in DOT and City tank trucks, respectively, the V/R ratio:

—Is 15% *smaller* for aluminum than for steel, when comparing metal plates of the same thickness. Hansen Aff. ¶ 4; Chan Mem. p. 2.

—Is 20% *greater* for aluminum than for steel, when comparing metal plates of the thicknesses which A.D. Little assumed were typical of DOT and City trucks. Ind. Group-Mar 15.

These and the other calculations do not establish whether the DOT truck is more likely to suffer a puncture than the City truck. Only A.D. Little translated its calculation of V/R ratios of aluminum and steel into a "an increase in puncture probability by about 50%," using a separate chart in the Sandia report. NYC Appl. Ex. 5, p. B–6. But that conclusion is invalid, because A.D. Little arrived at a 37% difference in V/R ratios based on assumed yield strengths for aluminum (20,000 psi) and steel (100,000 psi) which the City has abandoned in the further calculations made by City Fire Department engineers Hansen and Chan. *Compare* A.D. Little study, p. B–6, *with* Hansen Aff. ¶ 4 and Chan Mem. 2.

Mr. Chan's calculations of V/R ratios based on the minimum thicknesses allowed (for steel in FPD 7–74, and for aluminum in 49 CFR § 178.346, Table II) are not sufficient for analysis. He used the minimum thickness allowed for an aluminum tank no larger than 4,500 gallons (0.151 inches) rather than the minimum required for an aluminum tank between 8,000 and 14,000 gallons (0.173 inches). He also ignored the requirement in § 178.346–2 that the metal be thick enough to satisfy separate standards on structural integrity. See 49 CFR 178.345–2(b), 178.345–3.

The fact that aluminum has a lower melting point than steel may create a possibility that the entire contents of an aluminum tank truck will be consumed when an accident results in a fire, as the City argues. NYC Appl. 20–21. But it is not correct to assert, as the City does, that "all the aluminum tanks involved in initial small fires melted completely." NYC Final 2. The total consumption of the tank's contents is not inevitable, for many fires are extinguished. See the 1980 Michigan report, p. 166 and Fig. 5.12. Even when a fire is not extinguished, the longer time the fire burns does not necessarily translate into "commensurately greater" damage, NYC Appl. 17, as already discussed.

The controversy over the relative advantages of steel and aluminum tanks is not a new one; it has been argued for many years, including in Docket No. HM–183, where the City submitted the A.D. Little study and explicitly contended that use of "the federally-approved aluminum type tank truck . . . in the City would increase by 85 percent the risk of serious spills and make a 'catastrophic accident' two-and-one-half times more likely than if the City-permitted trucks were used." NYC Dept. of Environmental Protection June 30, 1987 letter to then-DOT Secretary Elizabeth Dole.

As Mobil notes, no studies have resolved the controversy. The materials submitted by the City in this proceeding are not sufficient for RSPA to change its finding that the steel and aluminum alloys permitted for DOT MC–306 trucks provide equal levels of protection to the public, when all factors are considered, including the structural integrity requirements in the HMR and the larger tank capacity when aluminum is used rather than steel.

d. *Contentions on "exporting" risk*—Several comments discuss the notion that risk is "exported" from the City to other locations. API, UTA, CMA, IFTOA, the Industry Group, and the New Jersey Turnpike Authority, among others, allege that, in order to comply with the City's requirements on truck size, flammable or combustible liquids must be transferred from larger DOT trucks into smaller City trucks before entering the City. Ind. Group-Dec 4–5. This supposedly creates dangers relating to the transfer operation in areas outside the City and unnecessarily exposes residents of those areas to such risks.

However, the materials submitted by both the City and its opponents indicate that "downloading" or "offloading" operations do not occur to any meaningful extent. The City demonstrates that virtually all gasoline and fuel oil arrives at tank farms or storage terminals by barge, tank ship or pipeline, from which local deliveries are made to thousands of locations. NYC Appl. 37, NYC Reply 10–12. It also states that other materials are either transferred at distribution centers for other business reasons or delivered in City trucks directly from farther locations. *Id.*

Matlack and Chemical Leaman confirm that they do not make deliveries to the City because of concerns that truck-to-truck transfers are unsafe. CWTI states that loads of chemical wastes, which its members carry away from the City, are not combined outside the City, "even if they are of the same hazard class, [because such a practice would] attach generator liabilities to transporters."

Thus, the same considerations of risk within the City—*i.e.*, whether larger trucks will permit fewer trips and thus reduce risk from loadings, traffic accidents, and releases—apply outside the City as well. The increased likelihood of accidents, and the damage resulting therefrom, appears applicable to all types of flammable and combustible liquids that are being transported into the City in smaller trucks to meet the City's requirements.

e. *Finding on level of protection to the public*—The study by A.D. Little is the City's only attempt to quantify the overall increase in risk which the City asserts would be presented by DOT trucks, including the factors on which the City relies for its contention that both accident frequency and result are greater for DOT trucks than for City trucks. The A.D. Little study concludes that removing the City's design and construction requirements (as to tank capacity, steel, compartments and baffles) "will increase average risk by 85%, the frequency of catastrophic spill by 225% and the magnitude of catastrophic spill by 40–59%." NYC Appl. Ex. 5, p. 1–3.

The critique of that study by the Industry Group (Ind. Group-Dec Appx. 6) points out that very few factors account for A.D. Little's conclusion that DOT trucks with aluminum tanks have a greater "accident risk (both frequency and size) * * *" NYC Appl. 26. A.D. Little "should have come out with a decreased risk with large aluminum vehicles," except for three specific factors: (1) the higher frequency of accidents assumed for DOT trucks, (2) a 50% increased puncture probability assumed for an aluminum tank, and (3) the assumption that "30% of small spills would be converted to a large spill * * *" Ind. Group-Dec Appx. 6, pp. 1–2.

RSPA finds that these three factors are not supported by the evidence. The first two have already been fully discussed. There is no information to support a conclusion that DOT trucks will have significantly more accidents, for the same number of miles, than City trucks. The conclusion that DOT trucks are 50% more likely to receive a puncture in an accident than a City truck cannot be accepted because A.D. Little's underlying assumptions about the yield strengths of aluminum and steel used in tank construction have been abandoned by the City.

A.D. Little's assumption that "30% of small spills would be converted to a large spill * * *" is based on two other assumptions: "that perhaps 60% of small spills will result in a pool fire * * *" and one-half "of the pool fire incidences * * * will engulf the tank for long enough duration to cause the melting of the shell." NYC Appl. Ex. 5, p. 5–24. There is no explanation of the bases for these two underlying assumptions in the A.D. Little study itself.

The critique by the Industry Group notes that, to the extent A.D. Little relied on historical experience, that experience was not limited to New York City. Rather it was made up of nationwide data, based on larger DOT trucks with aluminum tanks which are allowed everywhere except in the City. Ind. Group-Dec Appx. 6. Therefore, it is not proper to assume that the risks with City trucks are equal to nationwide experience, and then attempt to show an increased risk for DOT trucks. (If there is less risk with City trucks, as the City contends but the Industry Group disputes, it must be shown as a reduction from the nationwide experience.) *Id.* In addition, A.D. Little's working papers contain a handwritten summary of 131 accidents, and a "fire occurred in 22% of the spill accidents and 2% without spills." *Id.* 21–22. This is much closer to the FHWA data for 1989 accidents involving cargo tank trucks nationwide than the assumption "that perhaps 60% of small spills will result in a pool fire * * *" NYC Appl. Ex. 5, p. 5–24.

Because A.D. Little's underlying assumptions cannot be validated, there is no basis for RSPA to accept the position in the A.D. Little study that 30% of the releases of a small amount of gasoline will be converted to a large release, on the theory that fire will consume the entire contents of an aluminum tank. The City's separate assertion that a gasoline fire will never be extinguished before the aluminum tank melts cannot be adopted, as discussed above.

RSPA finds that the City's requirements, which would make mandatory several options that operators have under the HMR with respect to design and construction of cargo tank trucks, will not afford an equal or greater level of protection to the public. An 8,500 gallon tank will allow the same amount to be delivered with fewer trips, and less mileage, when compared to a 4,000 gallon tank. As noted above, the reduction in trips and mileage has the potential to reduce accidents and the damage from accidents:

—In the majority of cases when there is no release of the hazardous materials;
—In the significant number of cases when there is a release of the hazardous materials, but the deaths, injuries and property damage are caused by the collision forces and not by the hazardous materials;
—In the small number of cases when the hazardous materials are released and do cause deaths, injuries or property damage; and
—In incidents when hazardous materials are released during loading or unloading.

The City's waiver application implies that nearly every accident is accompanied by a release of gasoline or fuel oil, and that all the deaths, injuries and property damage are caused by those releases. It makes no mention of the potential for reducing deaths, injuries and property damage which are caused by the collision forces, whether or not hazardous materials are released. It gives no consideration to reducing the number of times hazardous materials are released during loading or unloading.

The HMR have been issued "for the safe transportation of hazardous materials * * *" 49 App. U.S.C. 1804(a)(1). The City has not shown that DOT trucks (which comply with the HMR) will have more accidents for the same number of miles, or that accidents with DOT trucks will cause significantly more damage, than smaller City trucks. The available data show that fatal accident rates are comparable for City trucks and DOT trucks. The studies cited by the City and its opponents indicate that the risk of death in a collision with the 4,000 gallon City gasoline truck is virtually as high as in a collision with an 8,500 gallon DOT truck.

In summary, the use of DOT trucks is safer than the use of City trucks, because use of DOT trucks will result in fewer trips, fewer deaths and injuries, and less property damage. For this reason, RSPA denies the City's application for a waiver of preemption as to the design and construction requirements (truck body type; tank capacity, material, and shape; and requirements for compartments and longitudinal baffles) contained in FPDs 6–76 §§ 4, 5, 24 and 7–74 §§ 4, 5, 29.

3. Extent of Burdens on Commerce

RSPA's finding that the City's design and construction requirements for tank trucks carrying flammable and combustible liquids do not afford an equal or greater protection to the public, than the HMR, is sufficient to deny a waiver of preemption as to those requirements. However, it is still appropriate to address the parties' contentions as to these requirements' burdens on commerce.

RSPA's regulations at 49 CFR 107.221 set forth the following factors to be considered in determining whether the City's regulations unreasonably burden commerce:

(1) The extent to which increased costs and impairment of efficiency result from the State or political subdivision requirement.
(2) Whether the State or political subdivision requirement has a rational basis.
(3) Whether the State or political subdivision requirement achieves its stated purpose.
(4) Whether there is need for uniformity with regard to the subject concerned and if so, whether the State or political subdivision requirement competes or conflicts with those of other States and political subdivisions.

a. *Increased costs and impairment of efficiency*—In its application (p. 40), the City contends that the effect of its limitation on the size of tank trucks:

is only speculative, since it appears that larger trucks (which would lower costs) would be used to make deliveries in New York City only by the chemical industry, which represents, at most, one-tenth of the flammable and combustible liquids delivered in New York City. Gasoline and fuel oil would continue to be delivered locally, probably in the smaller trucks now being used.

However, virtually every opponent disputes this, and several comments note that larger semi-trailers deliver other products in many locations in the City. API states that elimination of the City's equipment requirements would probably bring about "a mixture of tractor-trailers and straight trucks with capacities from 4,000 to 9,000 gallons" based on "traffic congestion, roadway design, service station size, underground tank capacity, and volume of service station throughput." Mobil "would replace its delivery fleet immediately in favor of the Federal specification vehicle * * *"

The City argues that City trucks could efficiently be used in markets outside the City. NYC Reply 33–34. Numerous opponents disagree, stating that two separate fleets would be necessary; according to API, the "New York City specification equipment is not useful in other markets." Mobil and Castle Oil specifically describe separate fleets, using larger DOT trucks to serve customers on Long Island (Mobil) and Westchester County (Castle Oil), rather than the smaller trucks required within the City. A company based in New Jersey, Quadrel Bros., states that it "cannot serve customers in the City," because it "cannot afford to operate two fleets of equipment * * *. New York City's rules have been an economic barrier to our expansion into New York City."

Two chemical companies, already using larger DOT trucks for deliveries in the City, state they will not serve the City if a waiver is granted. Thibault & Walker Co. "delivers daily to its New York City customers in safe full-size DOT-approved trucks without fear of harassment by the City. Should RSPA grant the City a waiver, we will terminate our business relationship with our New York City customers." Reichhold Chemicals is "in New York City on a daily basis, making multiple deliveries to our customers there." It asserts that it "will terminate its customers in New York City," if a waiver of preemption is granted.

The fact that underground gasoline tanks are limited to 4,000 gallons, the maximum tank capacity permitted by FPD 7–74, is not considered a significant factor, because most gasoline retail locations have more than one tank. As Mobil indicates, the larger DOT truck enables the delivery of different grades of gasoline or diesel fuel in one trip.

Aside from the dispute as to the extent to which the DOT trucks would actually replace smaller City trucks, the potential savings calculated by consultants to the City and the Industry Group are remarkably close. In its study for the City, A.D. Little calculated that deliveries of gasoline and fuel oil in larger trucks would reduce annual transportation costs for gasoline by more than $5 million and for fuel oil by

almost $7 million; overall the savings would be in the range of 30–35%. NYC Appl. Ex. 5, 1–3, Tables 4.7, 4.8. This is approximately the same as the "at least 50%" increase in transportation costs allegedly caused by the City's equipment regulations, according to the Industry Group. Ind. Group-Dec 19.

Mobil states that its "rate per gallon of product delivered by our carrier in New York City is twice that of the same carrier operating in neighboring Long Island and Linden, New Jersey * * *." Empire State Varnish Co. states that it pays "6% more than our New Jersey competitors who can purchase [resins and solvents] in 6000 gallon tanks which are not allowed into New York City."

The City contends that its residents willingly pay the additional costs of using smaller tank trucks to pick up or deliver these materials. NYC Appl. 33–34. This contention is rebutted by opponents, including several paint and varnish sellers who are "residents" of the City. Moreover, additional costs cannot be passed on to City residents by those companies who do not sell in the City. According to Castle Oil, Westchester County companies do not buy fuel oil from Castle because they cannot bring their own larger trucks into Castle's terminal in the City. Since they do not sell in the City, these Westchester County companies cannot recover from City residents the additional costs for separate trucks that meet the City's requirements.

In sum, the City's requirements burden commerce by increasing costs and lessening efficiency in the transportation of flammable and combustible liquids in the City.

b. *Basis and purpose of the City's requirements*—The City states that "the basis for each of the regulations as to which a Waiver of Preemption is sought is safety." NYC Appl. 41. The fact that these "regulations have been in force for more than half a century [and] very few serious accidents * * * have occurred in New York City" allegedly shows that the City's requirements achieve their stated purpose. *Id.* Opponents dispute these contentions, arguing that "[e]nforcement of DOT's standards in the City would have prevented these accidents." Ind. Group-Dec 33.

In section A.2. of this Part III, RSPA analyzed in detail the City's arguments on safety and found that the City's design and construction requirements for tank trucks for flammable and combustible liquids do not provide "an equal or greater level of protection to the public than is afforded by" the HMR. The City did not show that the expected accidents, including the results therefrom (as measured in fatalities, injuries, and property damage), would increase if DOT trucks are allowed to make pickups and deliveries of flammable and combustible liquids in the City. Rather, RSPA found that the potential for a reduction in accident numbers and consequences was not overcome or outweighed by the alleged likelihood of increased accident frequency (on a per mile basis) or damage.

The City's requirements do not provide the additional safety which is the premise for those requirements.

c. *Need for uniformity and existence of conflicts*—Uniformity is at the heart of the HMTA and the HMR. Congress has found that "greater uniformity" in regulations for the transportation of hazardous materials will "promote the public health, welfare and safety * * *" 49 App. U.S.C. § 1801, note. "[I]n enacting new preemption standards [in 1990], Congress expressly contemplated that the Secretary would employ his powers to achieve safety by enhancing uniformity in the regulation of hazardous materials transportation." *Colorado Public Utilities Comm.* v. *Harmon*, 951 F.2d at 1581.

In IR–22, 52 FR at 46580–81, RSPA confirmed an earlier finding that packaging requirements, including those applicable to cargo tanks, fell within an area

> where the need for national uniformity is * * * crucial * * * Uniform standards in this area ensure safe efficient interstate transportation. State and local governments may not issue requirements that differ from or add to Federal ones with regard to packaging design, construction and equipment for hazardous materials shipments subject to Federal regulations.

In the 1990 amendments to the HMTA, the packaging of hazardous materials and the design and construction of packages were included within the "covered subjects," in which a local regulation is preempted unless it "conforms in every significant respect to the Federal requirement." 49 CFR 107.202(d) (as added in 57 FR 20424, 20428 (May 13, 1992)).

The City acknowledges that the HMTA "emphasizes both uniformity and safety—the former presumably not for its own sake, but as a means of achieving the latter." NYC Appl. 45. RSPA agrees that "a stated need for uniformity is not the only factor to be considered," *id.*, on an application for a waiver of preemption, but the City has not established that a departure from uniformity will meet the asserted "even more basic need for a level of safety high enough to protect the population of the nation's most densely-settled City." *Id.* 44. As discussed above, RSPA has not been able to find that these requirements afford an equal or greater level of protection to the public than the standards in the HMR.

At the same time, Chemical Leaman, the Conference on Safe Transportation of Hazardous Articles, IFTOA, and Yellow Freight System contend that a single set of regulations promotes safety in uniform training, inspections, operations, and emergency response. Many opponents also point to a potential for "a plethora of conflicting regulations as other states and/or local jurisdictions request waivers," as expressed by the Tank Truck Manufacturers Association.

The need for uniformity in the packaging of hazardous materials is critical. Deviations from uniform packaging standards are likely, as here, to create an unreasonable burden on commerce.

Because RSPA is denying the City's waiver application, it is unnecessary to consider potential conflicts with other jurisdictions which might apply for a waiver for differing local regulations.

d. *Finding on burden on commerce*—In order to determine whether the City's regulations "unreasonably" burden commerce, it is necessary to make "a sensitive consideration of the weight and nature of the state [or local] regulatory concern in light of the burden imposed on the course of interstate commerce." *Raymond Motor Transp., Inc.* v. *Rice*, 434 U.S. 429, 441 (1978). In the *Raymond* case, as here, the state or local government's "legitimate interest in regulating motor vehicles using its roads in order to promote highway safety," *id.* at 442, was advanced to justify the burdens imposed on commerce.

The City's requirements, limiting the size and types of tank trucks for the pickup and delivery of flammable and combustible liquids in the City, place a clear burden on the commerce in those products. At the same time, those regulations do not promote safety. Therefore, RSPA finds that the City's design and construction requirements (truck body type; tank capacity, material, and shape; and requirements for compartments and longitudinal baffles) contained in FPDs 6–76 §§ 4,5,24 and 7–74 §§ 4,5,29 unreasonably burden commerce.

Because it finds that the City's tank truck design and construction requirements in these FPD provisions unreasonably burden commerce, in addition to failing to afford an equal or greater level of protection to the public, RSPA denies the City's application for a

waiver of preemption in regard to those requirements.

4. Additional Gasoline Truck Requirements

Additional requirements in FPD 7–74 apply to gasoline tank trucks. First, the tanks must be painted red with the word "GASOLINE" in white letters on the tank and the truck bumpers. Sec. 28. Second, flammable liquids may be unloaded or discharged from tank trucks only by gravity. Sec. 3. As discussed below, the City states that "the Fire Department * * * will be revising the text of the regulation itself, so that it will henceforth apply only to deliveries of gasoline." NYC Appl. 27.

a. *Color and lettering requirements*—The HMR do not specify any color for trucks carrying gasoline or other flammable liquids but rather require placards indicating the nature of the hazardous materials. 49 CFR 172.500 *et seq.* The HMR also authorize marking a cargo tank containing only gasoline with the word "'Gasoline' on each side and rear in letters no less than 2 inches high." 49 CFR 172.336. Thus, the City's requirements mandate practices that a truck operator is allowed to follow, as one option, under the HMR.

In addition, by mandating these practices, the City's requirements eliminate another practice that is allowed under Federal regulations. As pointed out by Mobil and the Industry Group, the City's permanent and unique color and lettering scheme dedicates a tank truck to carrying only gasoline and prevents its use for other commodities or for delivering mixed loads (*e.g.*, gasoline and diesel fuel to a service station) in one truck. Ind. Group-Dec 24. The HMR expressly allow different commodities to be carried in separate compartments of the same truck, and provide for the use of a "Flammable" placard when both flammable and combustible liquids are carried at the same time. 49 CFR 172.504.

To the extent that tank trucks must be dedicated to separate commodities, and that a truck is not permitted to carry both gasoline and other liquids, additional trips with additional mileage may result. The potential for more accidents creates greater danger to the public. The City has provided no evidence to support the argument that dedicating vehicles to "particular categories of hazardous materials represents one way to prevent the problem of the potentially explosive mixture and contamination of flammable cargo." NYC Jan. 28, 1988 Memorandum on appeal of IR–22, p.12.

Matlack and CWTI object that, for trucks which operate both in and outside of the City, a marking system that is not uniform with other jurisdictions would cause confusion in the event of emergency. However, RSPA has already determined that some variation is permissible; a truck operator is allowed to use the red color and white "Gasoline" lettering scheme of the City's requirements as an option under the HMR.

Matlack and CWTI also asserts that, when a gasoline tank truck is empty, the City's permanent lettering scheme violates the prohibitions in the HMTA and the HMR against labelling or placarding a container which does not contain hazardous materials. See 49 App. U.S.C. 1804(e), 49 CFR 172.401(a), 172.502(a). When a tank is empty, it must remain placarded unless it has been "[s]ufficiently cleaned and purged of vapors to remove any potential hazard." 49 CFR 172.514(b). In that case, it may not be labelled or placarded, and the operator would have to remove the "Gasoline" marking. (This requirement applies to a tank truck marked under 49 CFR 172.336 as well as one conforming to the City's color and lettering requirements.)

The City also argues that "ten-inch high white letters saying 'Danger' and 'Gasoline' * * * are certainly easier to see, night or day, than a small DOT placard with a code number," NYC Reply 24–25, and that the color and lettering scheme "gives an immediate clue to emergency response personnel at an accident as to what type of hazard they are about to encounter. Placards can be removed or destroyed in a fire; a permanent marking is far safer." NYC Appl. 29. However, the dedication of separate trucks to gasoline and other liquids, which increases trips and miles as well as accident exposures, poses a greater risk than these other prospects for increasing safety. In sum, RSPA finds that the City's requirements do not afford an equal or greater level of protection to the public than the HMR.

There is also a potential for increased costs and lower efficiency when separate trucks must be used to transport gasoline and other products, as Mobil and the Industry Group point out. With separate trucks required by the City's red color and white lettering requirements, there would be more costs from the additional trips and, in some cases, the need for a truck operator to buy one or more separate trucks. This burden on commerce is unreasonable because it is not offset by an increase in safety and because it is related to the packaging of hazardous materials, a subject requiring national uniformity.

Since RSPA finds that the City's red color and white lettering requirements for gasoline trucks do not afford a greater level of protection to the public and unreasonably burden commerce, RSPA denies the City's application for a waiver of preemption as to those requirements contained in FPD 7–74 § 28.

b. *Gravity discharge*—The HMR do not contain any requirement as to discharge methods. The City does not allow the use of pumps to unload flammable liquids from tank trucks, but specifies that: "The flammable product may be discharged by approved gravity only." FPD 7–74 § 3–1. In response to objections that certain liquids, such as

> paint components, for instance, are highly viscous and therefore very hard to unload solely by gravity discharge * * * the Fire Department has revised its enforcement policy and will be revising the text of the regulation itself, so that it will henceforth apply only to deliveries of gasoline.

NYC Appl. 27. An affidavit from a Fire Department attorney attests that procedures have been initiated to amend FPD 7–74 to carry out this change. NYC Final Ex. 39.

The City states that discharge of gasoline by gravity is safer than using pumps, because there is less likelihood of overfilling a tank from over-pressurization, and less will be released if a hose ruptures. It considers this requirement feasible because, "under other Fire Department regulations, storage tanks with permits to receive gasoline must be buried below ground level; * * * " NYC Appl. 27. It appears that most, if not all, gasoline tank trucks are designed with gravity discharge equipment. See Botkin Dec. 2, 1987 Dep. 88 (Ex. D to Goodman Jan. 29, 1988 Aff. in Docket No. IRA–40A).

Mobil supports a practice of not pumping gasoline "unless absolutely necessary," but stated that on occasion an above-ground storage tank would require pumping. As already noted, Matlack and others indicate they do not perform truck-to-truck transfers because pumps "increase the probability of an accident or incident."

Based on these comments, RSPA finds that a requirement that gasoline be discharged by gravity into underground tanks affords an equal or greater level of protection to the public as the HMR and does not unreasonably burden commerce. Having made those findings, RSPA also considers that it would be appropriate to waive preemption for such a local requirement, if the requirement existed in that form.

RSPA grants the City's application for a waiver of preemption as to FPD 7–74 § 3–1, limited to the discharge of gasoline to underground tanks. Mobil's

comment suggests the possibility of above-ground storage tanks, despite the City's separate requirement of underground tanks for gasoline (which requirement is not affected in any way by this decision). The City also agrees that gravity discharge should not be required for other liquids. Accordingly, RSPA denies the City's application for a waiver of preemption as to FPD 7–74 § 3–1, insofar as it presently applies to other flammable liquids and to the discharge of gasoline into tanks which are not underground.

B. Equipment Requirements—Compressed Gases

1. Truck Types Prohibited by the City

Federal regulations permit bulk transportation of compressed gases in tank trucks which meet DOT design specifications. 49 CFR 173.315. According to the City, "DOT permits any combination that will meet weight limits; in practice, * * * hazardous gases may be carried in full trailer-trucks." NYC Appl. 24.

The City has placed two major restrictions on the transportation or delivery of compressed gases in the City. First, the City prohibits the use of tank trucks for the storage, transportation or delivery of liquefied petroleum gases, 22 other named gases, and "[o]ther Gases which may be deemed to be hazardous by the Fire Commissioner." FPD 5–63 §§ 10.2, 10.5. Second, full trailers larger than 12 feet in length and 75 cubic feet in volume are prohibited for transporting all compressed gases. FPD 5–63 § 10.1. This effectively bars all full trailers, since there are no trailers small enough to meet this size requirement. Caviness Nov. 23, 1987 Dep. 44, submitted by the City with its appeal from IR–22 (Docket No. IRA–40-A).

In response to an objection by the Compressed Gas Association (CGA), the City concedes that "the definitions of [hazardous] compressed gases must be consistent with the definitions in the federal HMRs, and in fact such amendments are among those now being processed." NYC Final 4. The City also confirms (*id.* 5) that another regulation,

> already prohibits the bulk storage in the City of liquefied gases, flammable gases in solution and other flammable gases. Most of the gases listed in F.P. Dir. 5–63 § 10.5 fall within those definitions; however, fluorine and some Class "A" poisons do not.

The City has no "data on the types or amounts of compressed gases that are used in the City, * * *" *Id.* CGA assumes that "heating, refrigerant, welding, atmospheric [and] specialty gases * * *" are delivered in the City in quantities and mixes found in "any other urban jurisdiction." CGA also asserts that, "were the fire department's ban not on the books, bulk deliveries would be considered as a serious distribution option, to the extent fixed bulk storage facilities are available."

When read together, the different provisions of FPD 5–63 § 10 allow (1) "hazardous" gases only in "portable cylinders, which must meet federal DOT standards," NYC Appl. 15, so long as the cylinders are not carried in a full trailer truck, and (2) other non-hazardous gases in tank trucks, so long as the tank truck is not a full trailer.

The City provides little information with regard to its ban on tank trucks for hazardous compressed gases. Taking the same approach as with flammable and compressed liquids, it asserts that a larger amount produces more damage: if an accident occurs, "the amount of the hazardous gas that could be released from a few damaged cylinders would be much smaller and the resulting damage much less than if the gases were transported in one huge quantity in a full-size cargo tank truck." *Id.* 15. A letter signed by Staff Chiefs of the City's Fire Department (NYC Reply, Ex. 36), also states that "compressed gases, particularly LPG [liquefied petroleum gas] and LNG [liquefied natural gas], present an even greater hazard to the unique complexity of New York City," than gasoline tank trucks. The City also refers to a single "notable accident in 1980 on the George Washington Bridge entering the City, in which a tank truck carrying propane developed a leak * * *, causing a serious safety hazard as well as massive traffic tie-ups." NYC Final 5.

As RSPA found to be true for all hazardous materials, loading, unloading and other handling present the greatest potential for releases. CGA represents that the City's ban on tank trucks makes it "necessary to download to cylinder-filling facilities outside the city and then into cylinders." However, there is no information that such transfers actually occur or, if they do, whether there are other business reasons for them.

There could be fewer trips and reduced mileage, with the potential for a reduction in accidents, if tank trucks were allowed to deliver hazardous gases in bulk in the City. On the other hand, the lack of bulk storage facilities in the City raises doubts in this regard. It is also uncertain whether the use of full-trailers for non-hazardous gases would allow fewer trips and less mileage, with a potential for a reduction in accidents, since the City appears to allow semi-trailers for transporting gas cylinders or bulk quantities of some compressed gases.

The reasons given by the City for its ban on full trailers do not demonstrate that the ban provides equal or greater safety than the HMR, but, at the same time, they do not show that the City's requirements afford less protection to the public than the HMR. Even if a "tractor-trailer rig is suspectable [sic] to jack-knifing and roll-overs," NYC Final 5, there is nothing to indicate that full trailers have more problems than semi-trailers. As discussed above, the City failed to demonstrate any likelihood that hazardous materials are released in a significant number of jackknife accidents or that combination trucks have more accidents, or more accidents in which hazardous materials are released, than straight trucks.

The City's desire "to prevent a trucker from uncoupling a trailer (which can stand alone) and leaving it with a hazardous cargo overnight or otherwise unattended in the City," NYC Appl. 24, n.3, fails to show that a full-trailer poses more risk than a semi-trailer. This concern seems to be fully addressed by the prohibition in 49 CFR 397.7(b) against parking on the roadway and the requirement in 49 CFR 397.5(c) that:

> A motor vehicle which contains hazardous materials other than Class A or Class B explosives and which is located on a public street or highway or the shoulder of a public highway must be attended by its driver. However, the vehicle need not be attended while its driver is performing duties which are incident and necessary to his duties as the operator of the vehicle.

In sum, the City and other parties have not provided sufficient information for RSPA to determine whether or not an equal or greater level of protection to the public is provided by the City's restrictions on the types of trucks allowed to pick up or deliver compressed gases, as compared to the HMR. These requirements do not mandate any conditions which violate the HMR, but, as with the City's equipment requirements for flammable and combustible liquids, simply require practices that are optional under the HMR. However, on the information in this record, RSPA cannot determine whether those procedures afford an equal, greater or lesser level of protection to the public.

The lack of adequate information also prevents an assessment of these requirements' burdens on commerce, under the factors set forth at 49 CFR 107.221. There is little basis for finding increased costs or lessened efficiency from a ban on tank trucks if there are no bulk storage facilities to receive bulk

shipments. The City contends that these requirements promote safety, but, as just discussed, there is insufficient information to make such a finding. No conflicts with other jurisdictions have been raised, nor has a need for uniformity, except in the definition of gases covered by the City's regulations.

With regard to conflicts in definitions of hazardous gases, CGA states: "It also is a problem in determining the scope of the local rules." The suggestion that a carrier should "write a letter to the [fire] department * * *" for a ruling as to any gas not included in the list, as made by Assistant Chief of Fire Prevention DeMeo in 1987, is not practical. DeMeo May 26, 1987 Dep., p. 169 (Ex. A to Industry Group July 10, 1987 Comments in IRA–40A). While the City asserts that amendments are "now being processed" to make these definitions consistent with the HMR, NYC Final 4, it provides no specifics on those amendments. Castle specifically calls attention to DeMeo's statement, in a 1985 affidavit, about a proposed change—which never took effect—that would have eliminated Castle's need for a variance to make deliveries to customers out of the City.

Uncertainties as to which gases are "hazardous" jeopardize safety and also burden commerce. The shipper is forced into making assumptions as to the manner in which the materials should be transported or simply does not ship them. For that reason, definitions of hazardous gases in the City's regulations which differ from those in the HMR do not afford as much protection to the public and unreasonably burden commerce. RSPA, therefore, denies the City's application for a waiver of preemption of FPD 5–63 § 10.5.

In the absence of more information, RSPA cannot evaluate the City's legitimate interest in safety or balance that interest against indefinite burdens on commerce. RSPA cannot determine whether or not the City's equipment requirements for trucks picking up or delivering compressed gases unreasonably burden commerce. Because there is insufficient information for RSPA to make the statutory findings on safety or commerce, the City's application for a waiver of preemption as to FPD 5–63 §§ 10.1 and 10.2 is dismissed without prejudice, in accordance with 49 CFR 107.219(b).

2. *Additional rules on gases in cylinders*—In two respects, the City mandates the use of a specific operational procedure in transporting compressed gases in cylinders, while the HMR permit alternative means of providing the same protection. FPD 5–63 § 5.1–2 states that cylinders "shall not be loaded in any position which would prevent the proper functioning of the safety devices or result in injury to such devices." The City applies this regulation by "prohibiting transportation of gas cylinders in a horizontal position; * * *" NYC Appl. 28. It also requires that the cylinders have safety caps or collars during transportation, which it states "is designed to prevent the cylinder from becoming a flying projectile, * * *" and "one more restraint * * * is clearly safer." NYC Reply 25.

DOT regulations authorize transporting cylinders upright (and require the upright position for specification DOT–4L cylinders), but also allow the cylinders to be "loaded into racks securely attached to the motor vehicle; packed in boxes or crates of such dimensions as to prevent their overturning; or loaded in a horizontal position." 49 CFR 177.840(a)(1). The HMR mention safety caps as one of several alternative means of providing protection for cylinder valves. 49 CFR 173.301(g).

DuPont's comments indicate there is no real dispute on the "principles of the security of cylinders or containers and their safe handling and securement." The City asserts that safety caps provide an "additional level of protection," and that, when a gas cylinder is horizontal, liquid rather than vapor "is next to the vent valve," and a release of the gas in liquid form "would be extremely dangerous." NYC Appl. 28. CGA denies that the requirements add anything:

> . . . [T]he different way of handling cylinders in New York injects an element of confusion but no discernible safety benefit. Provisions on restraints and valve caps are in the federal rules and it needlessly complicates national cylinder distribution by compelling this interstate industry to become aware of and to teach individual employees to comply with different rules at the municipal level.

Here, except for possible "confusion," there is no contention that the City's requirements actually lessen safety. On the other hand, there is little information from which RSPA can determine the extent to which these requirements accomplish their intended purpose of increasing safety or weigh that purported benefit against an asserted need for uniformity and reduction in confusion. No party has shown whether there are cost or efficiency differences between the City's rule and the HMR as to a carrier which only picks up or delivers gas cylinders in the City. No comments establish whether carriers which operate outside the City will have to modify their operations to comply with the City's regulations and perhaps engage in reloading before entering the City.

There is insufficient information as to the safety provided by the City's regulations and the potential for confusion and delays in transportation, for RSPA to determine whether or not the City's requirements for transporting cylinders provide an equal or greater level of protection than the HMR or unreasonably burden commerce. For that reason, RSPA cannot make the required findings on safety or burden on commerce in order to grant a waiver of preemption as to FPD 5–63 § 5.1–2. The City's application for a waiver of preemption as to FPD 5–63 § 5.1–2 is dismissed without prejudice, in accordance with 49 CFR § 107.219(b).

C. No Smoking Regulations

Federal regulations prohibit smoking "on or about any motor vehicle while loading or unloading any explosive, flammable liquid, flammable solid, oxidizing material, or flammable compressed gas * * *," 49 CFR 177.834(c), and smoking or carrying "a lighted cigarette, cigar, or pipe on or within 25 feet of—(A) A motor vehicle which contains explosives, oxidizing materials, or flammable materials; or (B) An empty tank motor vehicle which has been used to transport flammable liquids or gases * * *" 49 CFR 397.13.

The City states that its no smoking regulations extend to "anybody on any truck carrying flammable or combustible liquids or flammable gases." NYC Appl. 28. The City's application asks for a waiver of preemption only as to FPDs 6–76 § 25 and 3–76 § 7; the City has not requested a waiver of preemption as to similar prohibitions in FPD 7–74 § 31 and FPD § 5–63 § 12.

As the City notes, in IR–22 RSPA found that the HMTA and the HMR did not preempt the no smoking prohibition on FPD 6–76 applicable to tank trucks carrying combustible liquids. *Id.* The Federal court specifically excluded FPDs 6–76 § 25, 5–63 § 7, and 3–76 § 12 from its findings of preemption in the October 18, 1991 and March 23, 1992 orders.

Two commenters support broader no smoking rules without approving the exact scope of the City's regulations. "Mobile supports both the DOT and the New York City Fire Department regulations which forbid smoking during the delivery of gasoline or fuel oil." DuPont states that it "concurs with the principles behind the smoking prohibitions detailed."

The only opposition to the City's no smoking rules was expressed by CGA, which called the DOT regulations "sufficient [and] clearer than the City's

rule," and objected "to any local restriction purporting to limit the behavior of a driver of a motor vehicle in DOT-regulated commerce, stemming only from the presence of hazardous materials cargo."

RSPA affirms its decision in IR–22 that regulations on smoking such as those in FPDs 6–76 § 25, 5–63 § 7, and 3–76 § 12 are not preempted by the HMTA. Smoking is not within any of the "covered subjects" defined in 49 App. U.S.C. 1804(a)(4)(B). It is possible to comply with both the City's smoking prohibitions and the HMR at the same time, and the City's broader restriction does not create any obstacle to the accomplishment and execution of the HMTA and the regulations issued thereunder.

Because these sections of the City's FPDs are not preempted, RSPA does not reach the issue of a waiver of preemption as to these no smoking prohibitions.

D. Emergency Transfer Requirements

Federal regulations specify certain actions to be taken in the case of an accident involving a vehicle transporting flammable liquids. 49 CFR 177.856. Among those regulations is a prohibition against transferring a flammable liquid "from one motor vehicle to another vehicle, * * * on any public highway, street, or road, except in case of emergency." *Id.* § 856(d). Additional Federal requirements for prompt notification of accidents involving trucks carrying hazardous materials also apply under various circumstances. See 49 CFR § 171.15 (incidents during the course of transportation of hazardous materials with specified results); 49 CFR 394.7 (fatal accidents); see also 40 CFR 302.6 (release of a reportable quantity of any hazardous substance).

The City's FPDs do not specifically set forth notification requirements, but rather state that, in an emergency, flammable and combustible liquids may be transferred only when "authorized by a representative of the Fire Department" and only to "authorized" vehicles. FPDs 7–74 § 26, 6–76 § 26, 3–76 § 14. The City asserts that requirements concerning emergency transfers should apply to "trucks carrying combustible liquids such as fuel oil, which is almost as easily ignited as flammables." NYC Appl. 30–31. It also indicates that "the Fire Department wants to be on the scene when such truck-to-truck transfers are made and therefore requires notification to and permission by a Departmental representative before the transfer is made." *Id.* 31.

State and local governments have the primary responsibility for emergency response to highway accidents. See, *e.g.*, IR–2, 44 FR 75566, 75568 (Dec. 20, 1979); IR–17, 51 FR 20928, 20933 (June 9, 1986). In its comments, CWTI referred to the City's Local Emergency Planning Committee and argued that, to avoid confusion and promote safety, the Fire Department's role in emergency response should be addressed through that committee. CWTI also opposed additional "notification requirements," noting that "[t]ransportation-related releases [of hazardous substances] can be reported to the 911 operator" under 40 CFR 355.40(b)(4)(ii).

These concerns about the City's own coordination and organization of emergency response measures should be raised with the City agencies involved. They are not matters which prevent RSPA from finding that the City Fire Department's role in emergency transfers of flammable or combustible liquids provides at least an equivalent level of protection to the public. Similarly DuPont's desire that emergency transfers be made only with the approval of "the shipper/manufacturer" as well as the Fire Department is also a matter which is properly addressed to the City. RSPA's role in considering a waiver application is not to rewrite local regulations but to determine whether a waiver of preemption is appropriate.

There is no indication that the City's requirements for emergency transfers increase the costs or affect the efficiency of transportation of flammable and combustible liquids. These requirements are intended to increase safety in emergency situations, and it appears that they accomplish that purpose. Since emergency response is primarily local in nature, there does not appear to be a potential for confusion or conflict with other jurisdictions; a great need for uniformity, such as in the packaging area, is not present here.

For the above reasons, RSPA finds that FPDs 3–76 § 14, 6–76 § 26, and 7–74 § 26 afford an equal or greater level of protection to the public as the HMR and do not unreasonably burden commerce. RSPA further finds that it is appropriate to grant a waiver of preemption for these requirements, and RSPA grants the City's application for a waiver of preemption as to these FPD provisions.

E. Inspection and Permit System

The City also seeks a waiver of preemption as to its requirements in FPDs 5–63, 6–76 and 7–74 that tank trucks which deliver flammable and combustible liquids, and all trucks which deliver compressed gases, must have a Fire Department permit. (The City has not requested a waiver of preemption as to the permit requirements in FPD 3–76, applicable to platform trucks.)

The permit and any renewals are valid "for a period to be determined by the Fire Commissioner but in no case to exceed one year"; they are "revocable and not transferrable to a new ownership * * *"; and the metal permit plate and tab must be fastened to the truck as specified in the requirements. FPDs 5–63 § 1, 6–76 § 1, 7–74 § 1. Application for the permit must be "on forms prescribed by the Fire Commissioner and shall contain such information as he shall require." *Id.* The fee for the permit (*id.*, FPD 5–65 §9) is presently $105. NYC Appl. 35.

Although the language of the City's permit requirements does not refer to inspections, as those requirements are "applied" and "enforced," 49 App. U.S.C. 1811(d)(2), they include an annual inspection to check "[t]he trucks' general safety level * * * as well as their conformity to the [Fire] Department's design requirements * * *" NYC Appl. 30–31.

The permit requirements of the City are part of, and tied to, the City's design and construction requirements which RSPA found to be preempted by the HMTA. For that reason, the permit requirements were held to be preempted as well. See IR–22, 52 FR at 46582. As discussed above, RSPA cannot make the statutory findings required for a waiver of preemption as to the City's equipment design and construction requirements in FPDs 5–63, 6–76, and 7–74. For the same reasons, RSPA denies a waiver of preemption as to the City's permit requirements to the extent they are a part of, and tied to, the design and construction requirements.

On the other hand, as stated in the Administrator's action on the City's appeal from IR–22, "a permit system is not *per se* inconsistent * * *" with the HMTA. IR–22(A), 54 at 26705. States may require a safety inspection of all common carriers, when the trucks home state does not have an inspection program. *American Trucking Ass'ns, Inc.* v. *Larson*, 683 F.2d 787 (3d Cir.), *cert. denied*. 459 U.S. 1036 (1982).

Valid state and local permit and fee requirements are not preempted by the registration requirements of the HMTA for certain persons offering or transporting hazardous materials. 49 App. U.S.C. 1805(c). RSPA has issued a Notice of Proposed Rulemaking to implement this section of the HMTA. 56 FR 51294 (October 10, 1991). The burdens and problems of duplicative or inconsistent state and local registration requirements are being addressed by a

working group created under another provision in the 1990 amendments to the HMTA, 49 App. U.S.C. 1819. (The preemptive effect of the requirement for motor carriers transporting hazardous materials to obtain a safety permit from DOT, under 49 App. U.S.C. 1805(d), has not yet been determined.)

However, any fees imposed by states and localities "in connection with the transportation of hazardous materials * * *" must be "equitable" and must be "used for purposes related to the transportation of hazardous materials, including enforcement and the planning, development, and maintenance of a capability for emergency response." 49 App. U.S.C. 1811(b). Any requirement to "generate and submit documentation to local authorities that is in excess of the HMR's requirements" is inconsistent with, and preempted by, the HMTA. *Colorado Public Utilities Comm.* v. *Harmon*, 951 F.2d at 1582.

RSPA encourages State and local adoption of the HMR. *E.g.*, IR–17, 51 FR at 20930; IR–19, 52 FR 24404, 24410 (June 30, 1987); IR–31, 55 FR 25572, 25579 (June 21, 1990). Congress and DOT also strongly encourage vigorous enforcement of the requirements in the HMR, and other requirements in State and local law which are not inconsistent with the HMR, through both periodic and roadside spot inspections. IR–31, 55 FR at 25584 and other rulings cited there. See also 49 CFR Part 350, and 49 App. U.S.C. 2304(g)(1) (Motor Carrier Act of 1991, Pub. L. 102–240 Section 4002(h), Dec. 18, 1991). Thus, State and local inspection requirements are not *per se* preempted by the Federal inspection requirements set forth in 49 CFR 177.804, 178.345–15 (b)(2), (c)(2), and 180.407 (b), (c).

Considered separate and apart from the City's truck design and construction requirements in FPDs 5–63, 6–76, and 7–74, the permit requirements in those same FPDs are not preempted by the HMTA, provided that (1) the annual permit fee is "equitable" and is "used for purposes related to the transportation of hazardous materials * * *" and (2) the information required on the application form is not in excess of any information requirements of the HMR and does not go beyond what is necessary for processing and issuing the City's annual permit. For that reason, as so limited, it is not necessary for RSPA to make the findings specified in 49 App. U.S.C. 1811(d) or to consider the appropriateness of a waiver of preemption as to the City's inspection requirements.

IV. Ruling

RSPA takes the following action on the City's application for a waiver of preemption:

A. A waiver of preemption is granted concerning the City's requirements covering emergency transfer, for the reason discussed in III.D., above, as those requirements are set forth in FPDs: 3–76 § 14–3(d), 6–76 § 26–3(d), and 7–74 § 26–2(c).

A waiver of preemption is granted concerning that portion of DPD 7–74 § 3–1 which requires that gasoline be discharged by gravity of gasoline from tank trucks into underground tanks, for the reasons discussed in III.A.4.b., above.

B. A waiver of preemption is denied concerning the City's design and construction requirements for trucks transporting flammable and combustible liquids for pickup and delivery in the City, including the color and lettering requirements for gasoline trucks, for the reasons set forth in III.A.1.–3. and III.A.4.a., above, as those requirements are set forth in FPDs: 6–76 §§ 4–1, 4–2, 5–1, 5–2, 5–3, 24–1; and 7–74 §§ 4–1, 4–2, 4–3, 5–1, 28–1, 28–2, 29–2.

A waiver of preemption is denied concerning the City's definition of hazardous compressed gases in FPD 5–63 § 10.5, for the reasons set forth in III.B.1, above.

For the reasons set forth in III.E. above, insofar as the City's inspection requirements are part of, or tied to, the truck design and construction requirements in FPDs 5–63 §§ 5 and 10, 6–76 §§ 4, 5, and 24, and 7–74 §§ 4, 5, 28, and 29, a waiver of preemption is denied concerning the inspection requirements set forth in FPDs: 5–63, §§ 1.1, 1.3, 1.4, 1.5, 1.6, 9: 6–76 §§ 1–1, 1–3, 1–4, 1–5, 1–6: and 7–74 §§ 1–1, 1–3, 1–4, 1–5, 1–6.

For the reasons set forth in III.A.4.b. above, a waiver of preemption is denied concerning FPD 7–74 § 3–1, which presently requires the use of gravity for discharge of flammable liquids other than gasoline and does not limit applicability of gravity discharge requirements for gasoline to tanks which are not underground.

C. The City's application for a waiver of preemption concerning the City's requirements for transporting compressed gases, in FPD 5–63, §§ 5.1–2, 10.1, and 10.2, is dismissed without prejudice for lack of sufficient information, for the reasons set forth in III.B.1.–2., above.

D. No action is taken on the City's application for a waiver of preemption concerning to the City's no smoking regulations set forth in FPDs 3–76 § 12 and 6–76 § 25, discussed in III.C., above, because these requirements are not preempted by the HMTA.

For the same reason, as discussed in III.E., above, no action is taken concerning the City's inspection requirements set forth in FPDs: 5–63, §§ 1.1, 1.3, 1.4, 1.5, 1.6, 9: 6–76 §§ 1–1, 1–3, 1–4, 1–5, 1–6: and 7–74 §§ 1–1, 1–3, 1–4, 1–5, 1–6,

to the extent that these requirements are separate, and severed by the City, from the truck design and construction requirements in FPDs 5–63 §§ 5 and 10, 6–76 §§ 4, 5, and 24, and 7–74 §§ 4, 5, 28, and 29, and provided that (1) the annual permit fee is equitable and is used for purposes related to the transportation of hazardous materials, and (2) the information required on the application form is not in excess of any information requirements of the HMR and does not go beyond what is necessary for processing and issuing the City's annual permit.

V. Petition for Reconsideration/Judicial Review

In accordance with 49 CFR 107.223(a), "[a]ny person aggrieved" by RSPA's decision on the City's application for a waiver may file a petition for reconsideration within 20 days of service of that decision. Any party to this proceeding may seek review of RSPA's decision "by the appropriate district court of the United States * * * within 60 days after such decision becomes final." 49 App. U.S.C. 1811(e).

This decision on the City's application for a waiver of preemption will become RSPA's final decision 20 days after service if no petition for reconsideration of this decision is filed within that time. The filing of a petition for reconsideration is not a prerequisite to seeking judicial review of this decision under 49 App. U.S.C. 1811(e).

If a petition for reconsideration of this decision is filed within 20 days of service, the action by RSPA's Associate Administrator for Hazardous Materials Safety on the petition for reconsideration with be RSPA's final decision. 49 CFR 107.223(e).

Issued in Washington, D.C. on May 29, 1992.

Alan I. Roberts,

Associate Administrator for Hazardous Materials Safety.

[FR Doc. 92–12966 Filed 6–1–92; 8:45 am]

BILLING CODE 4910–60–M